

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 8, 1834.

We understand that upwards of 100 persons passed between Philadelphia and Trenton, on Monday, on the new Rail Road.

[From the Philadelphia Gazette.]

PHILADELPHIA AND TRENTON RAIL ROAD.—On Saturday last this road was opened, the whole distance being twenty-eight miles. It commences a short distance from Kensington, and the regular operations of cars will run daily; the first starting from Trenton at half past 7, A. M. and Morrisville at 8 with horses, the second from Trenton at 2 o'clock, P. M. and Morrisville at half past 2, with locomotive.

The first line from Philadelphia, will leave a half past 8, A. M. with locomotive, and the second line at 2 P. M. with horses.

This line is of great importance to this city, and will greatly facilitate the traveller to and from New York.

[FOR THE NEW YORK AMERICAN.]

Mr. Editor:—The following is a synopsis of several articles which appeared in the Brooklyn Star, on the subject of "the Long Island Railroad." As it is proper, at this time, that the statements which it contains, and the views which it takes should, if true and sound, be generally known, or if untrue and illusory, that they should be contradicted and exposed, I beg you will give them publicity.

The enterprise is one of consequence. Whether we regard its probable revenue, or its promised local and general benefits, it is a matter of interest.

A chain of Railroad is in a state of forwardness, from Boston to the City of Washington, with the exception of one link, which is to be supplied by the proposed work, or by a Railway from Stonington to New York, on the main, of 150 miles in length, at a probable cost of \$60,000,000, and which chain must finally extend from our Eastern to our Southern and Western borders!

Local attention has been drawn to this important link; and the public attention must be drawn to, and brought to bear on it, from the actual necessity of the case. Of the vast utility of this work, either in a National or local sense, nothing further need be said, unless it be to request a due inspection of accurate maps and charts of the coast and waters, to satisfy

every man. I shall therefore proceed to another branch of the subject.

Of the probable cost of this improvement, with the requisite outfit, it may be proper to state here, that it will not exceed the capital of \$1,500,000, named in the charter, which is a very good one. And the following data will enable every one to form a speculative opinion of its income, for himself, viz:

Annual amount paid for the conveyance of passengers between Newport, Providence, and New York, at \$6 per passenger, is about \$475,000. Reducing the charges from \$6 to \$3, it would be

237,000

Annual sum paid for the carriage of passengers by steamboats, between Stonington, Norwich, New London, the various towns on the Connecticut River, and New York, is about

260,000

Annual amount paid for the conveyance of passengers, each way, on Long Island, is about

58,000

Annual sum paid for the transportation of produce and merchandize, each way, on the Island, is about \$147,000, of which at least half would be carried as now,

73,000

Annual amount paid for the freight of light goods, between the towns on the main, above named, and New York, unknown;—nominally, I will compute it at the sum of \$20,000, half of which would be

10,000

\$638,000

The present population of Long Island is about 90,000; and the present assessed value of its real estate, is about \$2,000,000 of dollars.

The distance from New-York to Boston, by this route, would be within 208 miles; to Stonington, within 123; to Saybrook, within 103; to Oyster Pond Point, within 102; and to Greenport, within 94 miles.

The last named place is one of the deepest, safest and best harbors in America; at all times easy of access and departure; and it is contemplated this point will form the eastern depot and termination of the road.

The width of Long Island Sound opposite Roco Point, 2 miles west of Greenport, is less than 10 miles. Between Stonington and Oyster-Pond Point, the distance is not less than 24, nor more than 28 miles. Greenport is west of the mouth of Connecticut River about 5 miles.

By the proposed line, passengers and light goods can be sent from New York to Boston within 12 hours! to Stonington within 7 1/2; to Saybrook within 6 1/2; and to Greenport within 5 1/2 hours.

It is thought, by some persons, that the revenue of this railway promises to be larger, rateably to its cost, than that of any work of the kind, for which a charter has yet been obtained in the United States. Without admitting, or controverting this point, I shall close this article with a few statistics and facts, accessible to the knowledge of every man who may be disposed to examine the subject, which will aid the public in forming a correct opinion.

"The Boston & Providence Railroad," when completed, with double track, is to cost \$30,000 per mile.

"The Stonington Railroad," when finished, with double track, it is computed, will cost \$26,000 per mile.

"The Camden & Amboy Railroad," when perfected, with double track, will cost \$36,000 per mile.—And this work, by its charter, is obliged to pay the State of New Jersey \$30,000 yearly; to compete, as relates to merchandize and produce, with a Canal of deep cut, connecting the rivers Delaware and Raritan, which cost \$2,500,000, or pay an interest on the capital invested therein, as the case may be; and may have to compete with the New Jersey and the Philadelphia and Trenton Railroads.

"The Mohawk & Hudson Railway" has cost \$90,000, and bids fair to cost \$100,000 per mile, before it is got quite right.

On some of these works there are ascents of from 20 to 37 feet in the mile!

"The Long Island Railroad," when finished, with double track, with no ascents on it worth naming, will cost, independently of outfit, about \$13,000 per mile.

By these statements, it will appear, the last named work will cost less than half, to the mile, of what the others, averaged, are to cost!

On this fact, the friends of the latter confidently rely.

Supposing a passenger is to start from New York to Boston, via Long Island and Stonington; that he is to pay three cents per mile for his transit; would not the profit of his conveyance be twice as great to the Road costing \$15,000, as to the one costing \$30,000 per mile? Unless it is to be supposed the landowner, the capitalist, and the public at large cannot see, or cannot appreciate the case under examination, then will the wanting link in the grand chain of Atlantic frontier Railroad be speedily forged, with immense benefit to New York, Long Island and the nation, and with great profit to the proprietors.

Respectfully, your obedient servant, W.
New York, 31st Oct., 1834.

WEEDS AND LOOSE STONES IN HIGHWAYS.—Very few of our readers, we presume, know that the following is in the Revised Statutes of this State.

"It shall be the duty of overseers of highways in each town, to cause the Noxious Weeds, on each side of the highway within their respective district, to be cut down or destroyed twice in each year,—once before the first day of July, and again before the first day of September; and the requisite labor shall be considered highway work.

"It shall be the further duty of the overseers of highways, once in every month from the first of April until the first day of December, to cause all the Loose Stones lying on the beaten track of every road within their respective districts to be removed; and to cause the monuments erected, or to be erected, as the boundaries of highways, to be kept up and renewed, so that the extent of such roads may be publicly known."

COLUMBIA RAILROAD, S. C.

Report of A. A. Dexter and C. E. Detmold, Civil Engineers, to the Committee on the Preliminary Survey of the Upper Route of the Columbia Railroad—September, 1834.

To Messrs. Hart, Blanding, Clark, Boatwright, Ewart, and Wallace, Committee of the Railroad Company.

GENTLEMEN,—Agreeably to the arrangement made with you on the 11th day of July, we proceeded to an examination of the route for a Railroad between Columbia and Branchville, and having completed the same, now have the honor to submit to you, with the accompanying maps and profiles, the following report:

Our examinations commenced on the south side of the Congaree Bridge, and the first bench mark, being the base, or zero, of the profiles and vertical measurements, is on the west wing wall of the abutment.

We conceive it practicable to carry the road across the river, on the superstructure, over the present carriage way of the bridge, at an expense materially less than that of the construction of a new viaduct. As the engines would of course remain on the south side of the river, the motion of the cars, or loaded wains, conducted by horse power, on the smooth surface of the railway, and restricted to a low rate of motion, could not injuriously affect the stability of the fabric, strengthened as it would be by the introduction of additional tie beams, and foundation pieces for the railroad. The noisy tumult of waters in the falls, beneath the bridge, would probably render the sound produced by the motion of cars overhead almost inaudible to horses, or other animals, passing below; at least, we should apprehend no danger or inconvenience on that account.

In case it were decided to adopt this plan of passing into town, the roof now on the bridge might be raised, and suffered to remain, with an alteration in the structure of the bracing, although perhaps in the end it would prove better economy to dispense entirely with the roof, and lay the rails upon a floored surface, zincd, or tightly caulked, like the deck of a vessel, so as effectually to protect the interior from the weather.

An objection to crossing the river on the present bridge, is the necessity, as will be seen by reference to the profile, of introducing a grade for horse power, in overcoming the ascent from the bridge to the hill at Wingard's. The length of this grade will be 1100 feet, and will terminate in a deep excavation, where some heavy cutting will be necessary in making room for the double tracks, and other fixtures requisite at the terminating station of the locomotive road. Inasmuch, however, as horse power will be necessarily resorted to in bringing the cars across the river, a further use of this agency between the bridge and the station would not be seriously objectionable, but for the steepness of the ascent, (181-100 in 100,) which will make a division of the load, brought over the river, necessary at the foot of the plane.

As we expressed to you, in our communication of the 14th August, a great deal of careful examination will be necessary in determining between a crossing of the river at this point, in the manner we have mentioned, or elsewhere below, on an independent viaduct; and our examinations not having been extended to a survey of the lower crossing, we are not prepared, at present, to give an opinion on this important question.

We are inclined to believe that a considerable saving in the cost of embankment and excavation, on the route surveyed, could be effected by a location crossing the river at Granby. Our data for this opinion, however, rests on the vague basis of the general formation of the country; nothing definite can be advanced till subsequent and accurate investigations, conducted by the company, shall place the whole

subject, with all its bearings, before the engineers.

Mr. McLane's road, already established for horse power, offers the means of transit for goods from the north side of the river to the upper part of the town, superceding the necessity of any examinations, on our part, of the profile of this side of the valley of the Congaree. At some future day, should the exigencies of business require it, an inclined plane, with stationary power, could be advantageously established, between the river and the main street, and in case of an extension of the road northwardly, the impossibility of using locomotive power on this part of Mr. McLane's road may render such an improvement necessary.

From about half a mile beyond Wingard's, a straight line may be attained to Congaree Creek, which may perhaps be crossed most advantageously above the confluence, with Six Mile creek, although sufficiently near the junction to avoid the high ground between the two, extending to within half a mile of the fork of the creeks. The line will of course pass on the north side of the creek, to the east of the ridge on which Taylor's negro houses are situated.

An altitude of about 18 feet will be necessary in crossing the bed of the creeks, in order to diminish the steepness of the ascents, and to save expensive excavation, which will also afford a secure elevation above the high freshets which at times prevail.

The bed of the creek is twenty-six and a half feet below our base. Crossing the creek we encounter the low ridge which divides it from the swamp contiguous. This swamp, however, is above overflow, the general height being about 14 feet below base. Leaving the swamp, which, where crossed by the survey, is about half a mile in width, the difficulty of rising out of the deep valley of the Congaree presents itself; a difficulty which, involving the possible necessity of an inclined plane, was of no ordinary character, and demanded unusual attention in the examinations.

The dividing ridge between the Edisto and Congaree rivers, we ascertained to be about 400 feet above the bed of the latter stream. Owing to the various streams which put into the Congaree river, such as the Congaree creek, Thom's creek, Savannah hunt, &c., we find the valley on this side very irregular in extent, diminishing somewhat between the creeks, and widening as the several vallies of the tributaries merge into the general depression. Not aware of the great altitude of the ridge, and hoping an ascent for locomotive power might be obtained, by bearing up on the side of the valley, as it falls off towards the river, and into Thom's creek, we pursued our line, passing out of the Congaree creek swamp on a low spur or ridge of pine land, at Dr. Taylor's; thence, in a very circuitous course, continually ascending, passing near Mr. Butler's and Mr. Hogabook's, crossing the Edisto road, and leaving it to the left, subsequently re-crossing the same, and leaving it with Jones's road, at about half a mile south of the fork, on the right, and, finally, attaining an altitude of 380 feet above the Congaree creek swamp, in a distance of only 9 miles; upwards of 250 feet of which is to be overcome in the first five miles.

Not only does the steepness and length of the ascent, which would for the first five miles, even with 52 feet cutting, rise at the rate of 1 in 100 or 52 8-10 feet per mile, render this route impracticable, but the absolute necessity of frequent curves, of short radius, in following the irregular conformation of the valley, entirely forbids a location in this direction.

Our attention was next directed to a route keeping entirely in the valley of Thom's creek, and following up the same, along the bed of the stream, crossing the creek immediately above Mr. Herman Geiger's mill pond, and passing on a ridge forming a plane of remark-

ably uniform rise, and apparently favorable between the main creek and a branch of the same, leaving the breaks of Savannah hunt a little to the left, and reaching an elevation of 252 feet at J. Stilus's. This route is favorable in direction, but is not practicable for locomotive power; the rise in the first two miles from the crossing of Thom's creek is 216 feet.

At the head of the valley of Wm. Geiger's creek, (a branch of Congaree creek,) the ground rises abruptly. There is no possibility of selecting a passage for locomotive power in this direction.

The result of our examinations leads us decidedly to the opinion that an inclined plane, with stationary power, affords the only practicable means of overcoming the ascent from the valley of the Congaree.

A favorable route for the plane may be readily selected in the valley of Thom's creek.

The ground is well adapted to the purpose at the head of the valley of the main creek; the ground abruptly putting up in a basin-like form with great uniformity of ascent. It will, of course, be desirable to accumulate as much of the rise in the plane as may be practicable, in order to allow a favorable graduation for locomotive power in overcoming the remainder of the elevation.

We have laid down upon the profile a graduation for stationary power, of one in seventeen, for 3237 feet, overcoming a rise of 190 40-100 feet, and leaving a grade of 30 feet in a mile for some distance above and below the plane.

The length of the inclined plane on the Charleston road is 3,800 feet, comprising an elevation of 182 feet, with a descent of 1 in 150, or 36 feet in a mile, for a distance of two and a fourth miles from the foot of the plane.

In future explorations, conducted with view to a final location, it would be well that a thorough examination be made of the head valley of Wm. Geiger's Mill Creek, which, from its greater length, and abrupt declivity from the very summit of the ridge, may possibly afford even a more favorable position for an inclined plane than that of Thom's creek.

The advantage of an abundance of timber and mills conveniently will tend greatly to facilitate the construction and lessen the cost of the plane.

Although, as occasioning an interruption in the line of locomotive transportation, an inclined plane is to be avoided, if possible, yet, the delay and expense attending its operation, where all the fixtures are complete, and the mode of operation properly systematized, are far less than would be supposed, especially from a partial observation of the plane on the Charleston and Hamburg road, which, put in operation before it was finished, is not yet fully completed, in every particular. A number of hands employed in filling in the road, construction of work-shops, &c., are supposed by passing observers to be attached to the plane, although but temporarily employed, and in no wise connected with the operations of the machinery.

It is well known that two eminent engineers, Messrs. Rastrick and Walther, recommended the adoption of stationary power on the whole line of the Liverpool and Manchester railway, in preference to locomotive engines, as subsequently adopted. Messrs. R. and W. estimated the saving in expense of transportation, by using stationary, instead of locomotive power, at about thirty-four per cent of the cost, and at 30 per cent of the amount. In the rival statements of Messrs. Locke and Stephenson, made after the successful application of locomotive power to the road, the saving in favor of locomotive power, in the cost of transportation, is placed at 42 per cent, and that of the annual expense at 39 per cent. These estimates made for the whole line, employing uninterruptedly the same kind of power, are not strictly applicable to an insulated instance of

an inclined plane, on a locomotive road, but yet we think, as formed from actual comparative performance of stationary and locomotive engines, upon roads where both kinds of power were used; these estimates are entitled to consideration. Even in the most unfavorable light, they place the cost of transportation with stationary power at only 269-1000 of a penny per ton per mile; say it should even be four cents per ton per mile in this case. By the chartered rates, the price is seven cents and seven mills per ton per mile, so that a handsome profit should be left to the proprietors. Mr. Stephens, the managing engineer of the stationary engine of the Charleston road, has politely assisted us in obtaining some minute practical information regarding the amount of goods which can be transported over the plane in a given time, with the actual daily cost attending its operation.

We find that working constantly twelve hours, the engine could pass over the plane, of freight both ways 552 tons, say, of cotton, going only one way, 1728 bales, the amount of all expenses of the engine and plane, including allowance for wear and tear of machinery, is \$15 96 per diem, being at the rate of \$3 46-100 per ton per mile. One of the highest estimates we have seen of the cost of transportation by stationary power, is that of Benjamin Wright, Esq., made from the actual performance of work on the railroad of the Hudson and Delaware Canal Company, which, on a length of sixteen miles, has five steam stationary engines, and three long self-acting planes. He estimated the cost per ton per mile to be from $8\frac{1}{4}$ to $3\frac{1}{2}$ cents; but, it is admitted that there was a want of economy in the management of the work.

We have dwelt thus long upon the subject of stationary power, in the endeavor to place it fairly before you, and will conclude by reiterating the observation expressed in our letter of the 14th instant, that, "we are fully convinced, when the prospects of trade and travel will warrant the construction of a road of this extent, the intervention of a single inclined plane should offer no impediment to the prosecution, and cannot affect the final success of the enterprise."

It is a fact not generally considered, that there is not a single railroad of any extent in Great Britain, and but few in this country, which operate entirely without the aid of stationary power.

At the Baptist Meeting house, near Mr. Pool's, is the summit height of the profile—the elevation being 364 feet above base, and, as we ascertained from the height of the road at Branchville, 511 feet above tide water at Charleston. This point, nine miles from the Congaree creek swamp, at Dr. Taylor's, is situated on a narrow ridge, from which the ground falls abruptly on the right and left of the line, and more easily in the direction of the survey; the deep breaks of Savannah Hunt and Sandy Run, forming the depression on one side, and of Wm. Geiger's Mill Creek and Big Bull Swamp on the other.

Over this point the line must necessarily pass, and from the altitude here attained, which is 69 feet in a distance of two miles and one-third from the head of the plane, as well as from the broken face of the profile, consequent upon the crossing of various depressions, this part of the route will be unusually expensive in graduation, with a rise of twenty-six feet in the mile for a part of the distance.

The deepest cutting will be about feet, but the soil generally a light sand, and with the appearance of continuing thus for fifteen or twenty feet, which we understand to be the fact, from the wells dug in the country.

From this point, our profile, as we proceed on the dividing Ridge, between the heads of Bull Swamp and Sandy Run, assumes a more even and favorable appearance. As the plantation of Capt. Wm. Taylor, about two miles

from the Meeting House, occupies the whole breadth of the Ridge, our line naturally seeks a passage on the high ground directly through it, and near the barn which stands at the head of a large break of Sandy Run. In compliance with a request of Capt. Taylor, not to pass with the survey through his cultivated land, which could not be done without injury to the crop, (a consideration which induced us in several instances to take a circuitous route to avoid planted grounds,) we passed along the fence, to the right of the plantation, thereby considerably diminishing the favorableness of the profile, and adding much to the length of the line, and irregularity of direction. From Capt. Taylor's to Mr. Williams's, situated on the narrow dividing ridge between Little Bull Swamp and Big Beaver Creek, the line passes over a fair country, and continues uninterruptedly favorable, with few exceptions, of considerable depressions, passing near and to the right of Mr. Hildebrand's, and to the left of Mr. Hook's field, to the old Kennely road, which we strike about one mile below Mr. Hook's.

The line subsequently follows nearly in the general course of the road, on the dividing ridge between Limestone and Cawcaw Swamps, crossing the latter at Jamieson & Glover's mill dam, three miles from Orangeburg.

From the head of the plane to the descent into the Cawcaw, embracing a distance of about twenty-five miles and a half, there will be no rise in the graduation to exceed one in two hundred, or twenty-six feet in the mile.

Occasional excavations, (in a light soil,) of from ten to twenty feet, and some high work, or embankment, of an equal altitude, will be necessary. The ridge, although it preserves its general height with some uniformity of elevation, is, nevertheless, occasionally depressed, and broken by the head breaks of lateral tributaries to the streams between which it is situated, and the alignment of the road will necessarily present frequent curvatures, although of large radii.

The whole of this route is supplied with an abundance of excellent timber, at present from its general remoteness to established mills, of little or no value to its possessors. Should the same liberal spirit of gratuitous dispensation which prevailed on the line of the Charleston road, actuate the proprietors on this route, we may expect a material saving to the company.

The natural descent from the ridge into the Cawcaw is long and rapid, being for two miles at the rate of forty-eight feet to the mile. In order to reduce the natural profile to a grade favorable for locomotive power, some heavy excavation must be encountered on the summit of the ridge, and elevated work, probably to the height of twenty-five feet, will be necessary in crossing the Cawcaw.

Long and careful examination at this point can alone determine the most favorable crossing of this depression,—and the location must be made, less with a reference to a narrow and advantageous formation of the swamp, than to a long and easy descent from the ridge, whereby a saving in expensive excavation and high work may be effected.

Whether the final examinations may fix the location at a point near to, or below the present bridge on the Bull Swamp road, we cannot now determine; but, owing to the formation on the opposite side, we think it will be necessary to cross the stream as low at least as the bridge, in order to maintain a favorable direction and profile in the subsequent course, which, in order to avoid the elevated bridge on which Orangeburg is situated, should leave the village to the left, and pass on the side of the hill, in the cultivated grounds, towards the river. We do not wish to be understood as pronouncing a route leaving the village to the right impracticable. A sharp rise of thirty-five feet to the mile, with not more than thirty feet excavation, would enable us to accomplish the route in that direction, but we give the

preference to an increased distance with a more easy profile.

The village of Orangeburg is 89 94-100 feet above base, and 57 38-100 feet above Glover's and Jamieson's mill dam, on the Cawcaw. To pass directly through the village, though feasible, would occasion, in addition to the increased expense of graduation, a depth of cutting in the streets incompatible with the convenience of the citizens, in the passage of ordinary conveyances, rendered the more objectionable from the proximity in passing of the locomotive engines.

By reference to the profile, the of the country may be seen from Orangeburg to Branchville, along the river road, on which our survey was conducted, with a view to avoiding a passage through occasionally cultivated lands, and the thick woods, and bays, which would have greatly prolonged our field labors, in an unhealthy season, and having been of but little or no advantage in forming the estimates, or determining the probable location.

Undoubtedly, the route leaving Orangeburg to the left should cross the River road, and pass into the pine land, back to the River land plantations, where the uncommon evenness of surface and the abundance of timber give this part of the line peculiar advantages, not surpassed by the same extent of country on any part of the Charleston road.

The line may terminate directly at the company's depot in Branchville, and connect, by means of a curve of ample radius, with the turn out, or side track, already established,—or a new lateral road may be constructed, at the intersection of the branch, exclusively appropriated to the cars from Columbia.

The height of the surface of the railway at Branchville is 134 feet above tide water at Charleston, and 13 1-100 feet below the top of the wing wall of the Congaree Bridge; consequently, the latter point is 147 feet above tide water at Charleston,—and the summit of the ridge passed over by the survey, at Mr. Pool's, 511 feet above tide.

On the profile, which for a great part of the distance presents a fair average of the face of the country, will be found a line of graduation. Where partial changes on the aspect of the profile may be expected to ensue from future and thorough examinations in the establishing of the final location, we have indicated the same by remarks and lines, shaded blue, on the profiles; and in our estimates, which are based on the line of graduation there established, we have made due allowances for them.]

Before proceeding to estimate the probable cost of this work, it is proper to furnish our opinion regarding the plan of construction which a wise economy would recommend.

The plan of pile construction, as adopted on the Charleston road, taking into view the peculiar character of the country, and the limited resources of the company, was not only judiciously applied, and well adapted to the purpose, but was indeed the *only one which could have succeeded* at the time, as there was not, at that early period in the history of railroads, sufficient confidence in the community regarding such enterprises, to have allowed the adoption of a more expensive plan of construction, with the least probability of success. The advantage gained by the company is this, that now, having, by the completion and full success of their great enterprise, established their work in the solid and permanent estimation of the public, they are enabled, without a useless expenditure in the original plan, to furnish from the Revenues of the road the means of its perfection.

Now that the superiority of railroads over every other means of transportation is generally acknowledged, and their advantages well understood, and every where appreciated, and daily evidences given of their gaining favor in the confidence of the community, it becomes us, in deciding upon a plan of construction, to

be governed by other considerations than those of a saving in the first cost, when there is necessarily involved, as a consequence, a large subsequent expenditure in repairs, and the more perfect adaptation of the road to the purposes of transportation.

But that which most decidedly renders the general plan of the Charleston road inexpedient for the work under consideration, is the great and marked difference in the character of the soil and country, in the two routes; in the first case, for a greater part of the distance confined to a low, flat, and occasionally inundated country, interspersed with numerous ponds, morasses, and swamps, in the treacherous depths of which an incalculable amount of earth, transported from remote distances, to form the embankments, would have been swallowed up; and in the other case, nearly throughout the line, passing over a dry and elevated region of country, with an undulating profile of the natural surface, in the necessary reductions of which earth will be afforded for the construction of the embankments.

The occasional use of the truss or bridge work in the deep depressions may be advantageously resorted to, and will afford both a substantial and economical construction, and also allow a more rapid prosecution of the work than would be practicable in the plan of earthen embankments, which, especially in loose soils, occupy much time in acquiring a solid basis and thorough stability.

(To be continued.)

NEW-YORK AND ERIE RAILROAD.—We are authorized to publish the following correspondence.

OWEGO, TIoga Co., Oct. 14, 1834.

Hon. WM. H. SEWARD:

Sir,—The undersigned, citizens of the county of Tioga, having a deep interest in the success of the projected railroad from N. York to Lake Erie through the southern tier of counties of this State, take leave to request an expression of your opinion in relation to that (to us) all-important improvement. From the situation in which you stand, as a candidate for the office of Governor of this State, an expression of your sentiments upon this subject is rendered a matter of peculiar interest to the citizens of the southern tier of counties, a section of country which has hitherto been effectually excluded from all participation in the benefits of our system of internal improvements. As citizens of that section of the State, and not as political partisans, we request an expression of your sentiments upon this subject, and we hope that our request may not be considered as intrusive or ill timed, especially as we are daily allusions in the public prints to your supposed hostility to this measure.

We are, Sir, very respectfully,

Your obed't serv'ts,

Eleazer Dana, Jas. Pumpelly,
William Platt, L. A. Burrows,
Gordon Hewitt, Harmon Pumpelly,
Charles Pumpelly, Wm. A. Ely,
Geo. J. Pumpelly, George Bacon,
Robert Johnson, Charles Talcott.

Auburn, Oct. 20th, 1834.

GENTLEMEN,—Your communication requesting the expression of my opinion in relation to the projected Railroad from Lake Erie to the Hudson River, thro' the Southern tier of counties, has been received. I cannot be surprised that you have made this application, when, as you say, you see daily allusions in the public prints to my supposed hostility to that measure. Yet, Gentlemen, you must be aware that those who are engaged in misrepresenting my views, will equally endeavor to prevent credit being given to the sincerity of opinions expressed upon a subject of engrossing interest at such a time. Anxious as I am to correct such misrepresentations, I could not bring myself to appear in public, even for that purpose, had I not learned from sources entitled to my confidence, that the views of Gov. Marcy have been solicited and are confidently promised by his political friends to be laid before the electors. Under such circumstances, it would seem to be unjust to the generous and confiding party who have made me their candidate, to suffer the great cause which they maintain to receive injury from my silence.—You however, Gentlemen, will bear witness, that I have not sought this opportunity of appearing before

the public, and that in doing so, I yield to the considerations already expressed.

It is wholly untrue that I am hostile to the projected Rail Road from Lake Erie to the Hudson River through the southern tier of counties. The vote which I gave in the Senate upon an incidental question connected with that improvement, had no reference whatever to the merits of the project itself, but was founded upon peculiar considerations growing out of the single question presented, & manner in which it came before the Senate, but in which my judgement was not in the least influenced by any unfriendly feeling to the Rail Road. On the contrary, I can freely state to you, Gentlemen, that I am and ever have been the advocate of the system of internal improvements by means of Rail Roads and Canals: that I regard it as one of the most important duties of the Government as fast as its developing resources will allow, to prosecute such a system of improvements of that description as will enable all the different sections of the country to enjoy, equally as possible, the advantages of a speedy communication with the great commercial metropolis of the State. I cannot doubt that the increased wealth and ability of the state, improved by a revision of the entire administration of the canal revenues, would allow us to resume and push to a successful completion this eminently important system. Among those improvements which are most indispensable to the great object of securing to this State the precious boon of the trade of the western States I have long believed one of the most desirable, is a work which would connect Lake Erie with the Hudson River, passing through the Southern tier of Counties, and which would give to the city of New York the advantages of the great Western trade at all seasons of the year, and particularly at those seasons of the year, when, without such a work, that trade must flow through different channels to a Southern port. To secure this trade was the great object of the system of internal improvements, projected and commenced by that distinguished public benefactor Dewitt Clinton. Experience has shown that this object has not been entirely accomplished, and I have no belief that it will be, until the improvement mentioned by you, together with others of a similar character in other sections of the State, shall be completed. It is certainly a consideration of much weight, that the suggested Railroad will bestow upon the Southern counties through which it will pass, advantages similar to those enjoyed by other parts of the State, where similar public improvements have been accomplished. That it is practicable, I am happy to learn, will be satisfactorily established by the surveys recently made under the direction of that experienced engineer Judge Wright.

With these opinions in its favor, you may be assured of my readiness, either as a private citizen or in whatever public capacity I may be called to serve, to afford every aid in my power, not only to the construction of this work, but to the completion of that comprehensive and beneficial system of internal improvements, commenced as I have already mentioned, and thus far continued with a success which has astonished ourselves.

I am, gentlemen, with the greatest respect, your fellow citizen,

W. H. SEWARD.

Messrs. Eleazer Dana Jas's Pumpelly
William Platt Latham A. Burrows
Gordon Hewitt Harmon Pumpelly
Cha's Pumpelly William A. Ely
Geo. J. Pumpelly Geo. Bacon
Robert Johnson Charles Talcott.

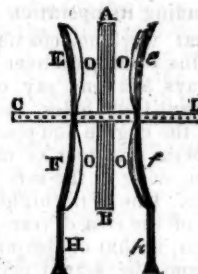
Application of the Principle of a Balance.

[From the American Journal of Science and Arts.]

The principle of a balance is a powerful one when ingeniously and judiciously applied to mechanics and the arts. Its applicability is universal. There are few if any machines now in operation that are not dependent upon this principle, or to which it cannot be beneficially applied. Look at the numerous machines employed in the various manufactories of Europe and America: how diversified, how multiplied, and how complex their operations; what a consumption of power is required to work or move them; what expense is incurred, and how great is their performance; nevertheless, how few are the parts, and simple the motions, absolutely necessary to answer, if not overrun,

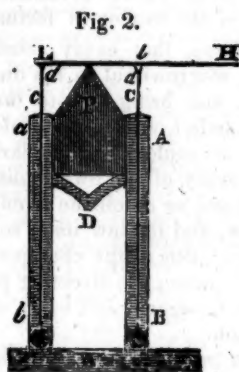
this performance. Indeed, what cannot man do on the principle of a balance, and what can he do without it. With it, with liberty to exert his power, he might displace the world; and without it, how limited would be his influence in mechanics and the arts, and how small his accessions of power and profit derived from that source. I conclude my premises (as effects balance causes, and causes effects,) by suggesting that some of the greatest discoveries yet to be developed to the world may, in all probability, be founded on the powerful and universal principle of a balance, which pervades not only mechanics and arts, but every part of the universe.

Fig. 1.



1. APPLICATION TO MILKING.—Fig. 1 represents a machine for milking. A B represent a light block, five inches long, three wide, and an inch and a half thick. C D represent a ruler-like piece of wood, or metal, five inches long, one third of an inch thick, and two thirds wide, perforated with holes at every sixth of an inch from end to end. This piece, C D, is to be firmly inserted, and fastened at right angles in the middle of the block A B. E F, e f, represent two similar, strong, light, thin boards, a little curved from their centre, each five inches long, three wide, and half or two thirds of an inch thick. H h represent the handles, which can be formed in connection with the boards, or attached separate. The boards are to have each one mortise, cut through its middle, of a sufficient size for the easy and regular motion of the ruler-like piece C D. Holes are to be made at right angles through the centre of each of these mortises, corresponding with those in the piece C D, so that by means of small pins or screws, these boards, E F, e f, can be moveably hung nearer or farther from the block A B, as required. o o o o, represent the spaces between the block A B, and boards E F, e f, which the teats are to occupy to be milked. The sides of the block A B, and the inner sides of the boards E F, e f, are to be lined with leather, or some other soft substance, stuffed with cotton, &c. so as to be elastic and press easy against the teats and not injure them. This lining should be harder, and project farther, the nearer it comes to the upper sides of these boards and blocks; so that when the pressure is given, it will commence at the upper parts of the teats and gradually increase downwards, till all the milk is forced out. Instead of this stuffed lining, springs, spiral wires, or some other elastic substance, may be used; perhaps springs are best. To work this machine, it is to be supported by the hands by means of the handles H h, in such a position that the teats will hang down between the block and the boards at o o o o, two teats each side of the piece C D. Both handles are to be moved inwards and then outwards, either fast or slow, so that the operation of

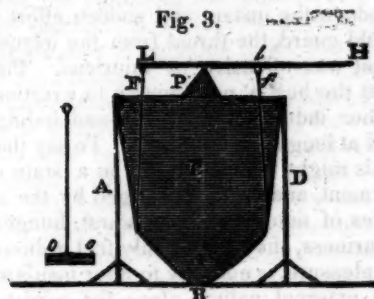
milking can be performed or regulated at pleasure. When the handles are moved inwards, the two nearest teats to the milker will be milked; when moved outwards, the two farthest; and thus, as the motions can be so quick, there will almost flow four streams, till the operation is performed. Instead of communicating the pressure on the outside, it may be applied on the inside by altering the construction a little. This machine is applicable to other purposes allied to the operation of milking. The construction, dimensions, weight, and quality of the materials are variable, but the principle of operation is the same.*



2. APPLICATION TO PUMPING.—Fig. 2 represents a balance suction or forcing pump, for water or air, wherein there is no loss of motion. W represents a body of air or water. A B, a b, represent two similar hollow cylinders, whose lower ends are inserted perpendicularly, equidistant, and parallel in the body W of air or water. P represents a pivot, which firmly connects the top of the cylinders, and across which the balancing lever L l is to be moveably hung and poised. H represents the handle of the lever L l. C c represent two similar piston rods, whose upper ends are moveably hung to the lever at d d, and to whose lower ends are attached either pistons or valves, as it is designed for a suction or forcing pump. D represents the pipes of both cylinders, united to convey off the air or water. It can be conveyed off separately. This is operated by an upward and downward motion of the handle H. Any equal number of pumps, either suction or forcing, of equal dimensions, can, by being connected on this principle of a balance, be worked or moved by one handle. This application is susceptible of numerous modifications.

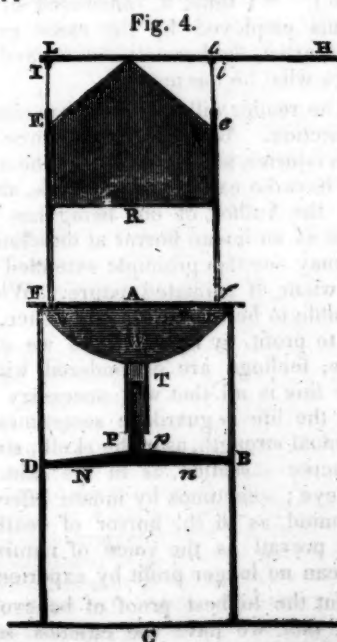
3. APPLICATION TO CHURNING.—Fig. 2 will serve to illustrate its application to churning. A, B, a b, represent two churns; C c, their dashers or piston-rods; L l, the balancing lever; H, its handle; P, its pivot, which connects them the same as the cylinder A B, a b. It is worked by an upward and downward motion of the handle H. This construction may be modified into a forcing or piston churn, by having a communication at the bottom between them, to force the cream alternately from one into the other. Instead of two churns, one churn resembling those commonly wrought by a crank, with a piston through the middle, and an aperture through that, would answer the purpose. I am of the opinion, that, in churning, the cream

would gather sooner, and form butter, by being powerfully forced alternately through small apertures, than by any other means, unless it be by adding some substance or composition that will immediately fetch it. Instead of the cream's being forced from one churn into the other and backwards, constantly, a small wheel full of holes, (the lids of the churns being made tight and fast,) might be attached to the lower end of each piston-rod or dasher, and made to operate up and down, and answer the same purpose, or a better than the former method.



4. APPLICATION TO WASHING.—Fig. 3 represents a washing machine. C represents the cistern, which can be lined with rollers on the two sides A D, to hold the water and the clothes to be washed; three feet high and three wide; A B D, its frame; P, the pivot; L l, the balance lever; H, its handle; F f, the rods on which the washers, beaters, or rollers, are hung; o o represent a beater, &c. attached to its rod F or f. This machine is operated by the upward and downward motion of the handle H, and can be variously modified.

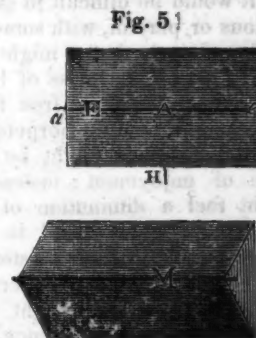
5. APPLICATION TO FULLING.—Fig. 3 will serve to illustrate its application to a fulling-mill or machine. There are two constructions to this application: a vertical and horizontal. Fig. 3 enlarged will represent the vertical one. The horizontal one is nearly the same as the vertical, only that the lever and rods have a horizontal motion, and the cistern must be modified a little to answer it. In both constructions the operating power is to be applied to the handle H.



6. APPLICATION TO AN AEROSTATIC OR HYDROSTATIC PRESS.—Fig. 4 represents an aerostatic or air, or a hydrostatic or water press: A B C D, its frame; W, the air or

water cistern, which in shape resembles the segment of a hollow sphere or hemisphere; T, a strong hollow cylinder inserted in or attached to the bottom of the cistern; N n, the follower, a strong bar, fitted to move up and down in the sides D B of the frame. To this follower is attached the piston P p, which is exactly fitted to move up and down in the cylinder T, so as to prevent the escape of air or water. The pressure of this press is given between the follower N n, and the side of the frame C. E F, e f, represent two hollow pipes, whose lower ends are tightly inserted into the cistern W. V v, two valves that exactly cover the lower ends of these pipes, and open sufficiently into the cistern. R, the pivot of the operating lever, which connects the top of the pipes; L l, the operating lever; H, its handle; I i, two rods that move up and down in the pipes, whose upper ends are moveably hung to the lever L l, and to whose lower ends are attached wheels or pistons with valves in their centre, opening downwards, exactly fitted to move up and down, and not allow the escape of air or water. To give the pressure either by air or water, it is admitted into the top of the pipes, passes through the valves in the wheels and the valves V v, until the cistern is full; the handle H is then to be worked, and the water or air will force down the piston P p, and consequently the follower N n, and press whatever is between it and C. To take off the pressure, the air or water can be let out of the cistern. Pistons might be used in the pipes. This press is susceptible of numerous modifications and applications.

7. APPLICATION TO PRINTING.—Fig. 5 represents a printing machine. A represents an oblong table or frame, set full of types, and balanced on its axle E e, which supports it at a a, moveably in two upright standards.



H represents the operating handle; M, a heavy or solid, oblong, triangular block, as wide and long as the table, over which it is to be firmly hung, so that one of its angles will run parallel and laterally with its axle E e. The two sides of the block M, immediately over the types or against which they will press, when the handle H is operated, must be lined with some elastic substance, in order to give a good impression. The types are to be inked by inking rollers, and the paper applied by hand or machinery. Instead of the table being moveably hung, and the block fixed, it may be reversed: the table fixed and block moveably hung. Instead of the block being triangular, and table flat, the block may be flat, and the table triangular. Every motion of the handle H, either upwards or downwards, will give an impression.

H. STRAIT.

East Nassau, Rennselaer co., N. Y., April 28, 1834.

* Having stated to the author some doubts as to this new process of milking, we have received his assurance that he has proved it practically, and that he desires its publication.—[Ed.]

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 680.)

We are told that we must not drink at meals, lest the fluid interfere with the operation of digestion; and of this there need be no apprehension. The stomach separates and lets off with the most curious skill all superfluous fluid through its orifice, while it retains the matter fit for digestion. It retains it in its left extremity, permitting the fluid to pass into the intestines, there to supply the other wants of the system no less important than the digestion. The veterinary professor, Coleman, ascertained that a pail of water passed through the stomach and intestines of a horse at the rate of ten feet in the minute, until it reached the cæcum. Drinking at a stated period after meals, say an hour, is at variance with both appetite and reason. The digestion is then effectually interfered with; for what was solid has become a fluid, (the *chyme*.) This fluid is already in part assimilated; it has undergone the first of those changes which fit it ultimately to be the living blood; and the drink mixing with this chyme in the inferior extremity of the stomach, or first intestine, must produce disturbance, and interrupt the work of assimilation.

Looking in this manner upon the very extraordinary properties of the stomach, we perceive how natural it was for physicians to give a name to the sensibility of which we have been speaking. The *Archeus* of Vanhelmont, the *Anima* of Stahl, were the terms used to designate this nature, principle, or faculty, subordinate to and distinct from perception; a notion entertained, and more or less distinctly hinted at, by philosophers from Pythagoras to John Hunter.

A modern philosopher,* of whom, in this instance, it would be difficult to say whether he be serious or playful, with some plausibility, however, asserts that it might be possible to carry on the business of life without pain. If animals can be free from it an hour, they might enjoy a perpetual exemption from it. Animals might be constantly in a state of enjoyment; instead of pain, they might feel a diminution of pleasure, and might thus be prompted to seek that which is necessary to their existence.

In the lower creatures, governed by instinct, there may be, for aught we know, some such condition of existence. But the complexity and delicacy of the human frame is necessary for sustaining those powers or attributes which are in correspondence with superior intelligence; since they are not in relation to the mind alone, but intermediate between it and the external material world. Grant that vision is necessary to the development of thought, the organ of it must be formed with relation to light. Speech, so necessary to the development of the reasoning faculties, implies a complex and exceedingly delicate organ, to play on the atmosphere around us. It is not to the mind that the various organizations are wanted, but to its condition in relation to a material world.

The necessity of this delicate structure being admitted, it must be preserved by the modifications of sensibility, which shall ei-

ther instinctively protect the parts, or rouse us into powerful and instantaneous activity. Could the eye guard itself, unless it possessed sensibility greater than the skin? Could it guard itself, unless this sensibility were in consent with an apparatus which acted as quick as thought? Could we, by the mere influence of pleasure, or by any cessation or variation of pleasurable feelings, be made alive to those injuries which might reach the lungs by substances being carried in with the air we breathe? Is there any thing but the sense which gives rise to the apprehension of suffocation, that would produce the instant and sudden effort which could guard the throat from the intrusion of what was offensive or injurious. Pleasure is at the best a poor motive to exertion, and rather induces to languor and indulgence, and at length indifference. To say that animals might be continually in a state of enjoyment, and that when urged by the necessities of nature, such as thirst, hunger, and weariness, they might only feel a diminution of pleasure, is not only to alter man's nature, but external nature also; for whilst there are earth, rocks, woods, and water, for our theatre of existence, the texture of our bodies must be exposed to injuries from which they can only be protected by a sensibility adapted to each part, and capable of rousing us to the most animated exertions. Take away pain, and take also away the material world, by which we are continually threatened with injury, and what, after all, is this but imagining a future state of existence, instead of that in which mind and matter are combined? If all were smooth in our path, if there were neither rugged places nor accidental opposition, whence should we derive those affections of our minds which we call enterprise, fortitude, and patience?

Independent of pain, which protects us more powerfully than a shield, there is inherent in us, and for a similar purpose, an innate horror of death. "And what thinkest thou, (said Socrates to Aristodemus,) of this continual love of life, this dread of dissolution, which takes possession of us from the moment that we are conscious of existence?" "I think it, (answered he,) as the means employed by the same great and wise artist, deliberately determined to preserve what he has made."

The reader will no doubt here observe the distinction. We have experience of pain from injuries, and learn to avoid them; but we can have no experience of death, and therefore the Author of our being has implanted in us an innate horror at dissolution, and we may see this principle extended through the whole of animated nature. Where it is possible to be taught by experience, we are left to profit by it, but where we can have none, feelings are engendered without it. And this is all that was necessary to show how the life is guarded: sometimes by mechanical strength, as in the skull; sometimes by acute sensation, as in the skin, and in the eye; sometimes by innate affections of the mind, as in the horror of death, which will prevail as the voice of nature, when we can no longer profit by experience.

But the highest proof of benevolence is this, that we have the chiefest source of happiness in ourselves. Every creature has pleasure in the mere exercise of his body, as well as in the languor and repose that follow exertion; but these conditions are so

balanced, that we are impelled to change, and every change is an additional source of enjoyment. What is apparent in the body is true of the mind also. The great source of happiness is to be found in the exercise of talents, and perhaps the greatest of all is when the ingenuity of the mind is exercised in the dexterous employment of the hands. Idle men do not know what is meant here; but nature has implanted in us this stimulus to exertion, that she has given to the ingenious artist—the man who invents, and with his hands creates, a source of delight, perhaps greater, certainly more uninterrupted, than belongs to the possession of higher intellectual powers, and far beyond any that falls to the lot of the minion of fortune.

We believe that every thinking person may have wherewithal in his own sphere to tutor him, and bring him to the temper of mind and belief which we would inculcate. Yet there is something peculiarly appropriate in the study of our own bodies. In chemistry we are so much the agents as to forget the law, and the law itself seems at least to intermit. But in the changes wrought in the animal frame, the directing power is uniform in its influence, and holds all in harmony of action.

We now learn without difficulty and without mystery, what is meant by organic and animal sensibility. The first is that condition of the living organ which makes it sensible of an impression, on which it re-acts and performs its functions. It appears from what has preceded that this sensibility may cause the blowing of a flower, or the motion of a heart. The animal sensibility is indeed an improper term, because it would seem to imply that its opposite, organic sensibility, was not also animal; but it means that impression which is referred to the sensorium; where, (when action is excited,) perception and the effort of the will are intermediate agents between the sensation and the action or motion.

We may sum up the inquiry into sensibility and motion thus:

1. The peculiar distinction of a living animal is that its minute particles are undergoing a continual change or revolution under the influence of life. Philosophers have applied no term to these motions.
2. An organ possessed of an appropriate muscular texture, and of sensibility in accordance with the moving instrument, as the heart, or the stomach, has the power of action without reference to the mind. The term *automatic*, sometimes given to those motions, conveys a wrong idea of the source of motion, as if, instead of being a living power, it were consequent upon some elastic or mechanical property.
3. There are sensibilities bestowed on certain organs, and holding a control over a number of muscles, which combine them in action in a manner greatly resembling the influence of the mind upon the body, yet independent of the mind: as the sensibility which combines the muscles in breathing.
4. In the last instance, a large class of muscles were combined without volition. But the whole animal fabric may be so employed, as in the instinctive operations of animals, where there is an impulse to certain actions not accompanied by intelligence.
5. A motive must exist before there are voluntary actions, and hence philosophers have supposed that there can be nothing but

instinctive actions in a new-born child. But we must distinguish here what are perfect at first, and what are imperfect and irregular, and become perfect by use and the direction of the will. The act of swallowing is perfect from the beginning. The motions of the legs and arms, and the sounds of the voice, are irregular and weak, and imperfectly directed. It is the latter which improve with the mind. From not knowing the internal structure, and the arrangement of the nerves, philosophers, as Hartley, supposed that an instinctive motion, such as swallowing, may become a voluntary act. Volition in the act of swallowing consists merely in putting the morsel within the instinctive grasp of the fauces, when a series of involuntary actions commence, over which we have no more control in mature age than in the earliest infancy. Swallowing is not a voluntary action, and the thrusting the morsel back with the tongue is like putting the cup to the lip. It is the preparation for the act of swallowing that is voluntary, but over the act itself we have no control.

It is an error to suppose that all muscular actions are in the first instance involuntary, and that over some of them we acquire a voluntary power. The power of volition over the muscles of the body is provided for by appropriate nerves, and no apparatus which is not supplied with that particular class of nerves can ever by any exercise or study become subject to volition. A child's face has a great deal of motion in it, very diverting from its resemblance to expression, before there can be any real motive to the action. It will crow, and make strange sounds, before there is an attempt at speech. But this gradual development of intelligence and acquisition of power ought not to be called the will attaining influence over involuntary muscles; since, in fact, the apparatus of nerves and muscles is prepared, and waits for the direction of the mind with so perfect a readiness as to fall into action and just combination, before that condition or affection of the mind which should precede the action takes place. A child smiles before any thing incongruous can enter the mind, before even pleasure can be supposed a condition of the mind. Indeed, the smile on an infant's face is first perceived in sleep.

6. All the motions enumerated above are spontaneous motions belonging to the internal economy; but the external relations of the animal, the necessity of escaping from injury, or warding off violence, require a sensibility suited to those outward impressions, and an activity consequent on volition. Nothing less than perceptions of the mind, and voluntary acts, suited to a thousand circumstances of relation, could preserve the higher classes of animals, and man above all others, from destruction.

All these provisions proceed from an arrangement of nerves and muscles. The mechanical adjustment of the muscles and tendons is perfect, according to the principles of mechanics. The muscles themselves possess a different property; they are irritable parts; motion originates in them. This living property of contraction is admirably suited, in each particular muscle, to the office it has to perform. In some it is suitable that the muscles should act as rapidly as the bowstring on the arrow; in others the action is slow and regular; in others it is irregular, and after long intervals, according

as the functions to which they are subservient require. The motions of the limbs, the motions of the eye, those of the heart and arteries, stomach, and bowels, are all different. This appropriation of action is not in the muscles themselves, but as they stand in relation to the nervous system, and the sensibilities which impel them.

We hope, then, by the course we have taken, that we have carried the reader to a higher sense of the perfection of the animal structure. We first drew him to observe provisions in the strengthening of the bones, the adjustment of their extremities to the joints, the course of the tendons, and other such mechanical appliances, proving to him the existence of intention in the formation of the solid fabric of the body. We have then explained how that motion is produced which was at all times familiar to him, but even the immediate causes of which he did not comprehend. We have in the last place shown him, that under the term life he has a still more admirable subject of contemplation in the adjustment of those living properties; in the sensibilities differing not so much in degree as in kind; and in their appropriation, both to the operations of the internal economy, and to the relations external, and necessary to safety.

It is not possible to contemplate these things without having the full proof before us of the power of the Creator in forming and sustaining the animal body. As a man with *gutta serena* may turn his eyes to the sun, and feel no influence of light, so may the understanding be blind to these proofs; and we may say with the celebrated Dr. Hunter, that he who can contemplate them without enthusiasm, must labor under a dead palsy in some part of his mind, and we must pity him as unfortunate.

MOUNT AUBURN.—We shall continue to lay before our readers intelligence on this subject, in the hope that the day is not distant when New-York city will have a suitable resting-place for the dead.

At a meeting of the Massachusetts Horticultural Society, Saturday, September 20, 1834, the Garden and Mount Auburn Cemetery Committee, by their Chairman, (Hon. Judge Story,) presented the following Report, which was read, accepted, and ordered to be printed in those of the city newspapers whose editors may be willing to insert the same.

R. T. PAINE,
Recording Secretary.

The Garden and Cemetery Committee of the Massachusetts Horticultural Society beg leave to submit the following Annual Report for the consideration of the Society:

The committee congratulate the society upon the continued improvement of the garden and cemetery, and the additional favor and encouragement which the design has received from the public. Before proceeding, however, to any particulars respecting this subject, they feel it their duty to make a few remarks, in order to correct some erroneous notions, which pervade certain portions of the community, relative to the nature and objects of the establishment. It is by no means uncommon to find persons impressed with the belief, that the establishment is a private speculation, for the private benefit of the members of the society, or of the individuals who originally advanced the money to purchase the grounds for the garden and cemetery, and that considerable profits have been already realized from it. This notion is utterly unfounded. The cemetery is in the truest and noblest sense a public institution,

that is, an institution of which the whole community may obtain the benefit upon easy and equal terms. No individual has any private interest in the establishment beyond what he acquires as the proprietor of a lot in the cemetery; and every man in the community may become a proprietor upon paying the usual sum fixed for the purchase of a lot. The whole grounds are held by the Horticultural Society in trust, for the purposes of a garden and cemetery; and no member thereof as such has any private interest therein, except as a corporator, or proprietor of a lot. The whole funds which have been already realized by the sale of lots have been devoted to paying the price of the original purchase, laying out the grounds, enclosing them with a fence, erecting an entrance gate and portal, and a cottage, and other structures for the accommodation of the superintendent, and defraying the incidental expenses. The expenditures have already amounted, as appears by the treasurer's report, to upwards of twenty-five thousand dollars; and the proceeds of the sales have fallen short of this amount by about two thousand dollars; so that as yet the expenditures have exceeded the income. It has always been the understanding of the Society, that all funds which should be obtained by the sale of lots, should, after defraying the annual expenses of the establishment, be applied exclusively to the preservation, repair, ornament, and permanent improvement of the garden and cemetery, and never to the private emolument of any of the members—and indeed this constituted the fundamental object of those who have become the proprietors of lots. It is due also to the gentlemen whose public spirit matured the design, to state that it was their primary object to exclude all private speculation and interests from the undertaking, and, by a wise and fixed policy, to secure all the funds which should arise from its success to public purposes of an enduring and permanent character. The Society has sanctioned these views. It was believed that a generous community would foster the design, and by a timely liberality in the purchase of lots, would enable the Society to make this beautiful retreat for the Dead at the same time the consolation and just pride of the Living. The committee have great pleasure in stating that these reasonable expectations have not been disappointed. Mount Auburn has already become a place of general resort and interest, as well to strangers as to citizens; and its shades and paths ornamented with monumental structures, of various beauty and elegance, have already given solace and tranquilizing reflections to many an afflicted heart, and awakened a deep moral sensibility in many a pious bosom. The committee look forward with increasing confidence to a steady public patronage, which shall supply all the means necessary for the accomplishment of all the interesting objects of the establishment.

Relying on this patronage, the committee indulge the hope that the period is not far distant when by the sale of the lots the Society will be enabled to enclose all the grounds with a permanent wall, to erect a temple of simple and classical character, in which the service over the dead may be performed by clergymen of every denomination: to add extensively to the beauty and productiveness of the garden; and, above all, to lay the foundation of an accumulating fund, the income of which shall be perpetually devoted to the preservation, embellishment, and improvement of the grounds. The last object the committee deem of the highest importance to the perpetuity of the establishment; and it cannot be contemplated with too much care and earnestness in all the future arrangements of the Society. In addition to these objects the committee would suggest the propriety of making arrangements for the admission of water from Fresh Pond into the ponds of the cemetery, and, after passing through them, of conducting it into Charles River. Such a measure would add to the sa-

lubricity of the ponds, as well as improve the general aspect of the whole scenery. It is believed that this measure may be accomplished at a comparatively small expense, whenever the funds of the Society will admit of a suitable appropriation. In the mean time it seems desirable to secure, by some preliminary arrangements, the ultimate success of the project.

The committee would further state, that by the report of the treasurer it appears, that the whole number of lots in the cemetery which have been already sold is 351, viz. 175 lots in 1832, 76 lots in 1833, and 100 lots in 1834; and the aggregate sum produced by these sales is \$23,225.72. The whole expenditures incurred during the same years amount to \$25,211.88. The balance of cash and other available funds now in the hands of the treasurer is \$5,403.32. The committee are of opinion, that reliance may safely be placed upon the future sales of lots to defray the expenses of the current year; and that, therefore, a portion of the funds now on hand may be properly applied to the reduction of the remaining debts due by the Society.

The committee would further state, that since the month of August, 1833, there have been ninety-three interments at Mount Auburn; eighteen tombs have been built, sixteen monuments have been erected, and sixty-eight lots have been turfed and otherwise ornamented. It is understood that other monuments are in progress, and will be erected in a short time.

The committee would further state, that finding the grounds at Mount Auburn were visited by unusual concourses of people on Sundays, and that the injuries done to the grounds and shrubbery were far greater on those occasions than any other, from circumstances which it is unnecessary to mention, they deemed it their duty, as well in reverence for the day, as in reference to the permanent interests of the establishment, and a regard to the feelings of the community, to make a regulation prohibiting any persons, except proprietors and their families, and the persons accompanying them, from entering the grounds on Sundays. The effects of this regulation have been highly beneficial. It has not only given quiet to the neighborhood, and enabled proprietors and their families to visit their lots on Sundays under circumstances of more seclusion, tranquillity, and solemn religious feelings; but it has put a stop to many of the depredations which thoughtless and mischievous persons had been too apt to indulge in, in their recreations on that day. Several other regulations have been made, which experience has shown to be indispensable to the due security and uses of the cemetery. The most important of these is the closing the gates at sunset and opening them at sunrise. And it may be observed of all these regulations, that while they allow a free access to the grounds to all visitors at reasonable times, and in a reasonable manner, they are calculated to prevent any desecration of them under false pretenses, or by secret misconduct.

The committee would further state, that in pursuance of the vote of the society at their last annual meeting, they made application to the legislature of the commonwealth at its last session, for additional provisions to aid the general objects of the Society. The legislature accordingly passed an act, entitled "An act in further addition to an act to incorporate the Massachusetts Horticultural Society," which is entirely satisfactory to the committee. They therefore beg leave to recommend, that the Society should, by a formal vote, accept the same.

All of which is respectfully submitted.

JOSEPH STORY,
Chairman of the Committee.

The Trial of Lieutenant Babbitt closed on Thursday last, and the decision of the Court has been for-

warded to Washington, whence it will be made known to the public. It has been stated in the newspapers that a sum, between five and six hundred dollars, has been raised by subscription, in order to pay the expenses incurred by Lieutenant Babbitt in defending this suit,—expenses which were large enough to deprive him of all his pay and emoluments for at least a year or two. In addition to this, we have heard that his counsel, Mr. Loring, after the trial was over, refused to receive any remuneration for his services, although he has spent considerable time in the case, and time too, which to a gentleman of his profession and business, is very valuable.—[Boston Courier.]

OFFICIAL.
ORDER } HEAD QUARTERS OF THE ARMY,
No. 68. } ADJUTANT GENERAL'S OFFICE,
Washington, Oct. 31st, 1834.

1. . . . PROMOTIONS and Appointments in the Army, by THE PRESIDENT of the United States, since the publication of the "Order" No. 49, of July 9th, 1834.

I.—PROMOTIONS.

Regiment of Dragoons.

Brevet Second Lieutenant Lucius B. Northrop, to be Second Lieutenant, 21st July, 1834, vice McClure, deceased.—(brevet 1st July, 1831.)

First Regiment of Artillery.

First Lieutenant David Van Ness, to be Captain 23d October, 1834, vice Griswold, deceased.

Second Lieutenant Richard C. Tilghman, to be First Lieutenant, 23d October, 1834, vice Van Ness promoted.

Brevet Second Lieutenant David E. Hale, to be Second Lieutenant, 23d Oct., 1834, vice Tilghman promoted.—(brevet 1st July, 1833.)

Second Regiment of Artillery.

Second Lieutenant Hugh W. Mercer, to be First Lieutenant, 10th October, 1834, vice Armstrong, deceased.

Brevet Second Lieutenant Edmund Schriver, to be Second Lieutenant, 31st July, 1834, vice Allen, resigned.—(brevet 1st July, 1833.)

Brevet Second Lieutenant Harrison Loughborough, to be Second Lieutenant, 10th Oct., 1834, vice Mercer, promoted.—(brevet 1st July, 1834.)

Third Regiment of Artillery.

Brevet Second Lieutenant Roswell W. Lee, to be Second Lieutenant, 14th Sept., 1834, vice Brown, deceased.—(brevet 1st July, 1833.)

Fourth Regiment of Artillery.

Second Lieutenant William F. Hopkins, to be First Lieutenant, 14th September, 1834, vice Canfield, appointed Assistant Topographical Engineer.

Brevet Second Lieutenant Alfred Brush, to be Second Lieutenant, 14th September, 1834, vice Hopkins, promoted.—(brevet 1st July, 1832.)

Second Regiment of Infantry.

Major Alexander R. Thompson, of the 6th regiment, to be Major of the 2d Regiment; (vice Whistler, promoted:) to rank from the 4th April, 1832.

Third Regiment of Infantry.

Brevet Colonel James B. Many, Lt. Colonel of the 7th infantry, to be Colonel, 21st July, 1834, vice Leavenworth, deceased.

Seventh Regiment of Infantry.

Major William Whistler, of the 2d Infantry, to be Lieutenant Colonel, 21st July, 1834, vice Many, promoted.

2—APPOINTMENTS.

Staff.

Assistant Surgeon Edward Macomb, to be Surgeon, to take effect 1st Nov. 1834, vice Macmahon, resigned.

John S. Gatlin, to be Assistant Surgeon, 3d August, 1834, vice Welsh, deceased.

George R. Clarke, to be Assistant Surgeon, to take effect 1st November, 1834, vice Macomb, promoted.

Topographical Engineers.

Brevet Captain James D. Graham, Assistant Topographical Engineer, to be Topographical Engineer, with the brevet rank of Major, 14th September, 1834, vice Anderson, deceased.

First Lieutenant Augustus Canfield, late of the 4th Regiment of Artillery, to be Assistant Topographical Engineer, with the brevet rank of Captain, 14th September, 1834, vice Graham, promoted.

3.—CASUALTIES.

Resignations.

Surgeon J. P. C. Macmahon, 30 October, 1834.

Second Lieutenant James Allen, 2d Artillery 31st July, 1834.

Second Lieutenant Philip St. George Cooke, 2d Artillery, 1st April, 1834.

Deaths.

Brevet Brigadier General Henry Leavenworth, Colonel of the 3d Regiment of Infantry, 21st July, 1834.

Brevet Lieutenant Colonel John Anderson, Topographical Engineer, 14th September, 1834.

Colonel Wm. Piatt, Paymaster, 16th August, 1834.

Assistant Surgeon Charles B. Welsh, 2d August, 1834.

Captain H. W. Griswold, 1st Artillery, 23d October, 1834.

Brevet Capt. Robert L. Armstrong, 2d Artillery, 10th Oct. 1834.

Second Lieutenant George W. McClure, Dragoons, 21st July, 1834.

Second Lieutenant Theophilus B. Brown, 3d Artillery, 14th Sept. 1834.

Brevet Second Lieutenant Geo. D. Dimon, 1st Infantry, 16th Sep. 1834.

2.—The officers promoted and appointed, will report accordingly, and join their proper stations and companies, without delay; those on detached service, or acting under special orders and instructions, will report, by letter, to their respective Colonels.

By order of ALEXANDER MACOMB,

Maj. General Comd'g in Chief.
R. JONES, Adjutant General.

AGRICULTURE, &c.

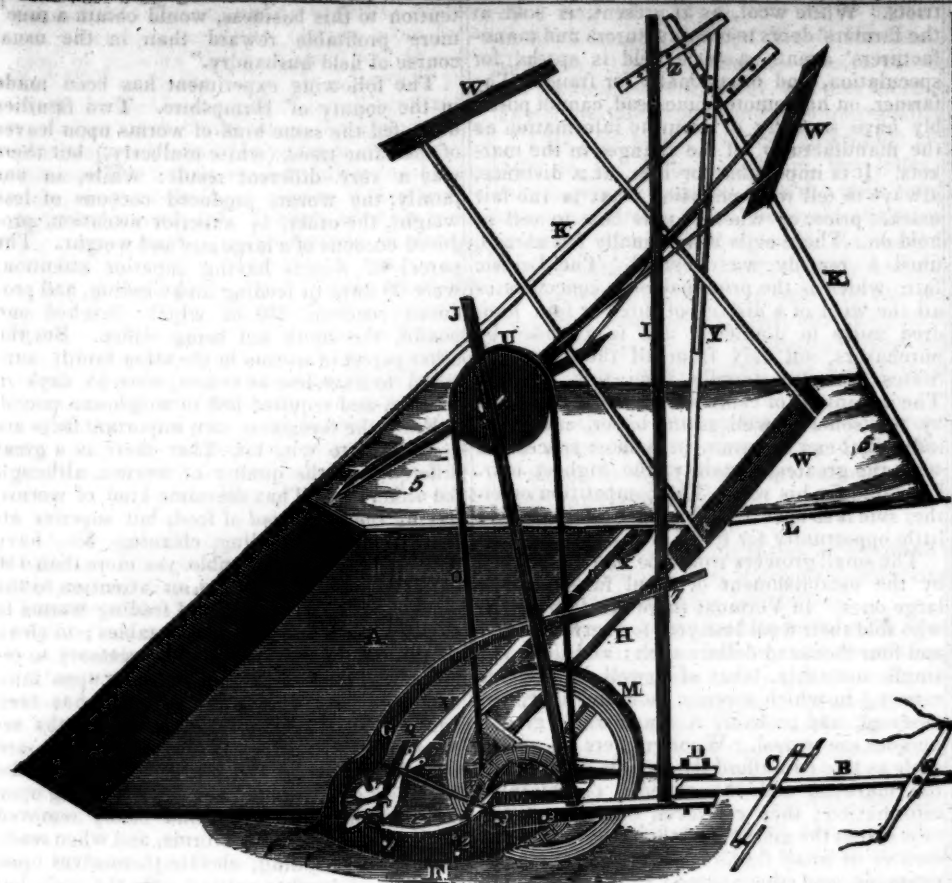
Cyrus H. M'Cormick's Improved Reaping Machine.

To the Editor of the Mechanics' Magazine:

DEAR SIR,—I send you a drawing and description of my Reaping Machine, agreeably to your request.

References—A, the platform; B, tongue; C, cross-bar; D, hinder end of the tongue; *e e*, projections in front; F, broad piece on each side; G, circular brace; H, diagonal brace; I, upright post; J, upright reel post; K, braces to upright; L, projection to regulate the width of swath; M, main wheel roughened; N, band and cog wheel of 30 teeth; O, band; p, small bevel wheel of 9 teeth; Q, do. of 27 teeth; r, do. of 9 teeth; s, double crank; T, cutter; V, vibrating bar of wood, with bent teeth; U, reel pulley; W, reel; X, wheel of 15 inches diameter; Y, reel post.

The platform A is of plank, made fast to a frame of wood, for receiving the grain when cut, and holding it until enough has been collected for a sheaf, or more. The projections in front, *e e*, are two pieces of the platform frame, extending about 1½ feet in front, and one or more feet apart. On each outside of these pieces is to be secured a broad piece of wood, as at F, by screw bolts, as at 1 1, passing through them and the projection of the frame. From the end of the outer broad piece, nearest the platform, rises a circular brace, G, projecting forward, and secured to the reel-post, I, by a moveable screw bolt. About nine inches in front of the screw bolts, at 1 1, are two other moveable screw bolts, as at 2, passing through both broad pieces and the ends of both projections, allowing for a rise or fall in adjusting the height of cutting; and at about the same distance, further on, is to play an axis of a wheel to be hung between said pieces. Near each end of this axis is secured an arm with two screw bolts, as at 3 3, one of which is moveable, as will be seen; projecting before the wheel, where the tongue is made fast between them by means of two screw bolts passing through all at D. H is a diagonal brace. On the opposite side of the machine is another reel-post, Y, connected near the top with a piece, K, on each side, with a moveable screw bolt, and extending, one to the end of a piece, L, which is attached to the outside of the platform, and divides the grain to be cut, from that to be left standing, the other to the hind end of the platform. T is an upright post, secured to the braces of G and H, at 7, by a moveable



bolt, bracing the reel-post Y by means of a piece, Z, passing diagonally over the reel. 55 is a strip of cloth about as high as the grain, for the purpose of keeping entirely separate the grain to be cut from that to be left. On the axis, hung between the hind pieces, is a wheel, M, of about two feet diameter, having the circumference curved with teeth to hold to the ground by. N is a cog wheel on the same axis, which serves also for a band wheel, on which and the pulley U the band O works. The cog wheel p working into the cog wheel N, has another cog wheel, Q, on its axle, which works into another small pinion, as at r, attached to the double crank s. These cranks are in a right line, projecting on opposite sides of the axis and in a line with the front edge of the platform. The lower of these works the cutter T, along the front edge of the platform, and the upper one the vibrating bar V, counter to each other. The cutter is a long blade of steel, with an edge like that of a reap-hook, and is supported on the under side by stationary pieces of wood at suitable distances apart. This blade is attached to the frame piece, below the edge of the platform, by means of moveable tongues or slips of metal; the bolt securing it to said frame-piece acting as a pivot, and that through the blade likewise, so that the motion is described in part of a circle. The vibrating bar is of wood, of the same length, and secured in the same manner, above the cutter, with iron teeth made fast in it, at about 2 inches apart, extending before the edge of the cutter, and bent round under it. This vibrating bar has been and may be made stationary, with bent teeth supporting the stalks on each side of the cutter, thereby dispensing with the upper crank; but the other is much preferable, as it reduces the friction and liability to wear materially, by

dividing the motion necessary for one between the two, and counterbalancing each other.

In the upper end of each reel-post is a groove, or long mortice, to receive the end of the axis of the reel, which rests on an adjusting pin, subject to be moved higher or lower, to suit grain of different heights—rye, wheat, or oats, &c. The reel W is composed of two or more cross arms at each end of the axle, projecting about 3 feet each way, and connected at their ends by a thin board of about nine inches in width, which, by the arrangement of the arms, runs in a somewhat spiral direction along the axis (though it might be parallel), the right end bearing up first on the grain. This reel, by the motion given by the strap O as the horses advance, bears the stalks upon the cutter, and when separated lands them on the platform A, which advancing till a sufficient quantity is collected, is discharged as often as may be required by a hand with a rake at the right end of the platform. On the left end of the platform is a wheel, H, of about 15 inches diameter, that may be raised or lowered as the cutting may require, corresponding with the opposite side. The point of the tongue is secured to its place by passing through a pin, 6, that is fastened to the hames of each horse by means of leather straps.

I have made some alterations on the drawing, which I think you will readily understand. Two horses were not used to the machine until the last harvest; the necessary changes of which were only described to the draughtsman, and were not all understood. I directed that it should not exceed 54 inches, though I think it does one way. The wheel H I think has a wrong direction.

Very respectfully, yours, &c.

C. H. M'CORMICK.

Experiments on Potatoes. By M. MOORE, Jr.
To the Editor of the Quarterly Journal of Agriculture, Mechanics, &c.

SIR,—The following is the result of an experiment tried by me the past season, and thinking it might interest some of the readers of your Journal, have made the memorandum annexed.

I planted, last spring, potatoes of the same kind, on the same ground, all manures exactly alike, eleven different ways, and the result was as in the following table, viz.:

		Product.	
		No. of potatoes.	lbs. oz.
No. 1,	Planted a single eye,	9	3 14
" 2,	" two eyes,	14	5 2
" 3,	" three eyes,	14	5 15
" 4,	" two sets of 2 eyes each,	15	5
" 5,	" do. 3 do.	25	5
" 6,	" do. 4 do.	34	5 10
" 7,	" three sets of 2 eyes each,	24	3 2
" 8,	" do. 3 do.	27	4
" 9,	" do. 4 do.	24	4 10
" 10,	" do. 5 do.	32	5 3
" 11,	" whole potatoe, with 11 eyes,	21	4 12

The size of the potatoes in No. 1 were as nearly of the same size as could well be; in No. 2, were good size, even; No. 3 were some very large, and others smaller; No. 4 were mostly of an even size; but all below were a great number of very small size. A farmer living near me had planted this spring an acre, and used 50 bushels of seed.

I endeavored to procure in New-York last fall, all the varieties of early corn I could, and had them planted on the 22d of May. I gathered on the 11th August the earliest kind, and it was fit to grind on the 18th, nearly two weeks previous to the next earliest, which was seed I procured of G. Thorburn, and which he called Cobbett's corn, he (Cobbett) having raised the same in England. The earliest kind had a long Indian name, hard to pronounce, and in distributing the seed this fall, I called it Moore's corn. Where I reside is 14 miles north of Utica; generally have frost in September, and I consider it important in raising corn that we should have the earliest.
M. MOORE, Jr.

Trenton Falls, Oct. 16, 1834.

Hops.—The Bangor Republican says there are farmers not thirty miles from Bangor who have taken a thousand dollars in cash as the clear income from their crop of Hops the present season. If this is correct the hop business must certainly be worth the farmers attention. Our farmers need more enterprise, and a better agricultural education. There are many ways in which they might turn a portion of their lands to much better account than they now do, and acquire for themselves a good living, and even independence, with one half the hard knocks and weary toils they usually endure. If they want their lands to produce money, let them turn their attention to the raising of Silk, Hemp and Hops, and they can get it.—[Portland Courier.]

Getting Spilt.—Yesterday, about fifteen large oxen were driven on board one of the steam boats at Market street, with a view of being taken across the river. While they were cogitating upon their new mode of locomotion, one of the animals broke the bar at the side of the boat, and fell overboard. The situation of the luckless animal excited the sympathies of his fellow travellers, who incontinently rushed over the side of the boat, and shared his watery accommodations. Twelve of the noble fellows turned their faces towards the island, which they soon reached, and three were drawn up at the slip. The question of freight, we suppose, will be left to some court of admiralty on their way back.

(We caution our compositor against heading this paragraph "bullvestment.")—[United States Gaz.]

COW-HOUSES.—Among the objects of inattention by farmers is suitable covering for cattle in winter, particularly cows. Generally, among farmers, they suffer from too much exposure to cold and wet; and among milkmen in and near cities, from want of pure and wholesome air. The following is from the Edinburgh Quarterly Journal of Agriculture.

Cow-houses for dairy-cows ought to be 10 or 12 feet high in the side-walls, with proper apertures in the wall, and no lofts over the cows, that they may breathe abundance of wholesome air. Animals so large and well-fed as dairy cows, whose lungs are capacious, ought to have abundance of free air, as breathing of foul air is injurious to them, especially when many of them are placed in one cow-house. Cows do not require much heat, so that they are kept dry; too much fresh air cannot be given them. All cow-houses, and the roads into them, ought to be well paved, and kept clean, as the effluvia of dung or urine cannot fail to injure cattle; and it is a great advantage to cows that they be well cleaned and curried with a comb and brush once every day. Where thin flags of stone can be procured, one of them, about four feet square, should be placed on each side of every stall, for two cows. An iron rod, called a slider, about 20 inches long, should be fixed at both ends in a perpendicular position on each side of each flag, so that a cow may be bound to each slider, by a chain which should slide up and down on the slider when the cow raises or lowers her head. When bound in this manner, the cattle are very secure, and have all the freedom necessary to move and lick themselves. Stone troughs are now generally placed before the cows to receive their food; and a passage in front for feeding the cows is a great convenience. Every cow-house ought to have a tank or well to receive the urine. I saw nothing in continental husbandry that I would more anxiously wish to see introduced into Scotland, than the careful manner in which the urine of cattle, and every species of dirty water, is carefully preserved and used as manure to the land. The Belgians have not only tanks at their cow-houses for collecting the urine, but they have reservoirs on different parts of their farms, to which it is removed as collected, and kept in them, excluded from the air, till it be convenient to be sprinkled upon the ground, which is generally done a few days before sowing the seed for a crop.

WOOL EXPORTATION.—It is the opinion of intelligent persons, who have the means of judging, that within fifteen years from this time, American wool will be as important an article of export as American cotton is now. This opinion is justified by the unprecedented increase of the production for the last ten years: an increase which for the last two or three years has been calculated to be at the rate of twenty per cent. per annum. The amount of wool raised in the United States last year and brought into market, (without reference to that consumed at home,) was estimated at sixty millions of pounds. This year it is probably seventy-five millions; next year it will be ninety. Now, to see how this amount of production compares with that of England. England, we believe, produces one hundred and sixty million pounds per annum, and she cannot be expected to produce much more, as all her grazing lands are now taken up. She imports on the average twenty millions from Germany, and ten from Spain. The United States, then, at their present rate of increase, will soon take the lead in amount, and very probably in quality of production, and with so vast a territory adapted for sheep-grazing, will become the great wool market of the world.

Many years will not pass, probably, before the German system of selling wool at fairs

will be adopted in our own wool-growing districts. While wool, as at present, is sold at the farmers' doors to manufacturers and manufacturers' agents, a wide field is spread for speculation, and occasionally for fraud. The farmer, on his remote homestead, cannot possibly have so early or accurate information as the manufacturer, of the changes in the markets. It is impossible for him, at a distance, always to tell with precision what is the fair market price, or whether it is best to sell or hold on. These evils were equally felt abroad, until a remedy was devised. The Leipsic fair, which is the principal one, concentrates all the wool of a district of three or four hundred miles in diameter, and is attended by purchasers, not only from all the European States, but occasionally from this country. The advantage of combination is here enjoyed by the seller as well as the buyer, and every individual can ascertain in a short space, and with the greatest certainty, the highest market value for his wool. The competition on either side is so open and direct, that there is very little opportunity for fraud or mistake.

The small growers would be more benefitted by the establishment of wool fairs than the large ones. In Vermont there are individuals who sold their wool last year for between three and four thousand dollars each; and there is a single township, (that of Orwell in Rutland county,) in which seventy thousand sheep are assessed, and probably a considerably greater number are owned. Wool-growers on such a scale as this can afford the trouble of watching the markets, and the expense of obtaining information; they can even control to a certain extent the markets of their vicinity. The owners of small flocks have none of these advantages, and the average price which they obtain is considerably less than that obtained by the large growers.—[Springfield Mercury, Mass.]

CHINESE MULBERRY.—The Secretary of the H. F. and H. Agricultural Society, in April last, received from Canton, China, some Chinese mulberry seeds, *Morus multicaulis*, through the agency of gentlemen residing there, and having the privilege of penetrating the interior. The secretary forwarded by letter a few of these seeds to several friends down east, from one of whom an acknowledgment has been made, an extract of which follows: "The Chinese mulberry seed you sent by letter, the last of May, have produced 43 fine plants of *Morus multicaulis*, which are valued very highly. The tallest is now, (August 23,) over two feet in height. This year have two kinds of worms, one the common, the other on account of yielding the greatest weight of cocoons, and considered the best and most valuable kind among us—(County of Essex.) Both kinds fed alike, and from leaves of the same white mulberry trees. The largest cocoons of each kind were selected and weighed—of the most valuable kind, took 18 to weigh an ounce, and of the common kind took 33 to weigh an ounce. Then took of all sizes without selecting and taken promiscuously, six ounces of each kind. Of the best kind took 183 to weigh six ounces, and of the common kind took 258 to weigh six ounces, being equal to 488 of the best kind to the pound, and 688 of the common kind to the pound."

The letter does not state how often, how attentively, or how long fed, but shows the result in feeding different kinds of worms. That the best attention was not given to the feeding seems probable, from an examination of the Essex Agricultural Report of 1833, where in one case 205 cocoons, the moth not stifled, being selected from 20,000, weighed one pound, being about 13 to the ounce—but on an average took 330 to the pound, and were in feeding 32 to 40 days. The committee in Essex say: "There is no mystery in the culture of silk. The whole process, from rearing the mulberry tree to the production of silk, is simple and easy,

and our farmers, by turning their care and attention to this business, would obtain a much more profitable reward than in the usual course of field husbandry."

The following experiment has been made in the county of Hampshire. Two families have fed the same kind of worms upon leaves of the same trees, (white mulberry,) but there was a very different result: while, in one family, the worms produced cocoons of less weight, the other, by superior attention, produced cocoons of a large size and weight. The parcel of worms having superior attention, were 28 days in feeding and winding, and produced cocoons, 230 of which weighed one pound, the moth not being stifled. But the other parcel of worms in the other family, supposed to have less attention, were 35 days in feeding, and required 583 to weigh one pound.

From the foregoing, two important facts are developed, to wit, 1st, That there is a great difference in the quality of worms, although fed alike. 2d, That the same kind of worms, having the same kind of food, but superior attention paid to feeding, cleaning, &c., have produced more than double, yes more than 150 per cent. in favor of superior attention to the worms. The usual mode of feeding worms is to keep them on shelves or tables; to clean them from the offal, it becomes necessary to remove the worms to another place upon mulberry leaves. But a better mode has been adopted by the family mentioned in the second fact. In this family the worms are placed on netting, and there fed without the necessity of a removal. The offal falling upon a paper screen beneath, and easily removed without molesting the worms, and when ready to rise for winding, elevate themselves upon and behind another netting near the wall, but connected with the netting whereon they were fed, affording a pleasant sight, being distributed upon the meshes: the whole paraphernalia of bushes are rendered unnecessary, the cocoons more easily separated, and less waste of silk. S.—[Northampton Courier.]

CULTIVATION OF Madder.—Mr. Tucker: There are consumed in the counties of Oneida and Oswego, by three manufacturing establishments, about two hundred and thirty-four thousand pounds of Madder every three years. The article is dug from the ground once in three years. Suppose each acre produced from 1500 to 2000 lbs., but say the former, on a common soil, it would require 156 acres of land to produce madder for these establishments; and perhaps the remaining manufactories, cloth dressers and families, use half as much more, making in the whole 351,000 lbs., which at 15 cents per lb., the average price of best Dutch madder for the last twelve years, is over \$50,000. What a large sum to send to foreign countries, for an article which can be cultivated here as well as potatoes! I am well aware that less than 156 acres will produce the above amount; as, according to the quality of the land and cultivation, it will produce from 1500 to 2000 lbs. of dry madder. I think it would produce 2000 lbs. on land that will yield in a good year 50 bushels of corn to the acre. The whole cost of cultivation on rich deep loam, say sandy loam, digging, washing, drying, grinding, rent of land, seed, and interest of money, at 2000 lbs. to the acre, will not exceed 7 cents per lb. There are without doubt, on most farms in these counties, a few acres of land at least suitable for the cultivation of this article. I consider that the demand will be for years unlimited; as there is not as yet, in the circle of my acquaintance, more than twenty-five acres under cultivation, nine of which are under my management. The price of American madder, for the three past years, has averaged about 23 cents, wholesale. The time for digging, as also for selling the top roots, or seed, is from the 15th of September to the 15th of October; the price at this time is \$3 per bushel, by the quantity. These top

roots are buried in the fall like potatoes, and planted the following spring in drills, six feet apart between the drills, (giving room for a crop of potatoes the first year,) and 12 or 18 inches apart in the drills. It is better to purchase the seed in the fall, as it will bear transportation much better when the buds are not much started,—and the price is considerably lower. The bottom roots are also dug at this time, and washed, (or rinsed, if dug from a light soil,) dried, &c. I have, of three years old roots, unengaged, 150 bushels, or enough to plant from 23 to 25 acres.

Mr. James Eaton, of Winfield, Herkimer co., is a successful cultivator and an honorable dealer in the article. There are others also, so that applicants can be supplied to a considerable amount. For more particular information, as to the cultivation of madder, see "Phinney's Calendar, or Western Almanac, for 1834,"—also a communication in the Cultivator for August, in which is stated my success in the cultivation of this root for two or three years past.

As it is not the intention of the subscriber to offer any remarks to the public but what he believes are founded in truth, he respectfully invites editors of newspapers devoted to agriculture and manufactures, to copy some portion of the above into their respective papers—also other editors who may consider the subject important to the public.

A small package of ground madder will be sent, on application, to the care of the President or Committee of any Agricultural Society in the state, previous to their annual fair, for the inspection of members interested.

RUSSEL BRONSON.

Bridgewater, Oneida co., Sept. 1, 1834.

RIBBON GRASS.—The ribbon grass of our gardens, *Phalaris americana*, is likely to become of great value in our husbandry; it has been found to be better adapted to wet boggy grounds than any other species of grass; to propagate rapidly, either by its seeds or by its roots; to yield a very large product in hay or pasture, and to be well adapted to farm stock. The first suggestion of this fact came to us in a letter from Abedn. Robinson, of Portsmouth, N. H., who says the discovery was accidental.

"A neighbor," he says, "wishing to get rid of some of the roots which encumbered his garden, threw them into a bog, where they took root, and spread over a large space of ground, excluding every other plant. The water flows through the roots at all seasons. The turf has become so solid as to bear a cart and oxen. I walked through this grass when in bloom, and never beheld a more handsome and luxuriant growth. It stood perfectly erect, full of large leaves, even, and from four to five feet high. It will produce two good crops in a season, and springs up immediately after the scythe. It produces excellent food; cattle feed it close, and appear to be more fond of it when made into hay than any other grass. I have spoken for one half of the roots of the patch, and have ground ploughed in my meadow in which I intend to transplant them, at about the distance of corn hills."

On a recent visit from the Hon. E. Goodrich, of Hartford, we were happy to receive, from that gentleman, a confirmation of the good opinion of the *Phalaris* which had been induced by Mr. Robinson's letter. It has been found as beneficial in Connecticut as in New-Hampshire. Not recollecting the particulars narrated, we would beg of Mr. Goodrich, when he sees this, to forward them to us, in order that we may publish them correctly. The subject merits further attention; and if our anticipations are not irrationally founded, the *Phalaris americana* will yet become the gamma grass of the north. It is truly perennial, spreads rapidly, and may be inoculated in the manner suggested by Mr. Robinson, especially in a soil saturated with water, with great facility, and at trifling expense.—[Cultivator.]

NATIVE CATTLE.—Having lately observed a new property in the native breed of cattle belonging to Mr. Ralph Haskins, of Roxbury, I am desirous to inquire through the medium of your paper, whether there are any other ones possessing a similar quality.

This milk consists in the remarkable richness of the milk and cream, the latter of which, when separated from the milk for the space of twelve hours, becomes of the consistency of a baked custard, and may be turned upside down without any harm, or spread on like butter. Cream in this state has been repeatedly carried into State street, and gentlemen in the Insurance Offices have churned it, and brought the butter in less than a minute.

Mr. Haskins states that, notwithstanding the richness of the cream, the milk, after it is skimmed, is much richer than common skim milk, and the cows also give as much as others usually do.

He has received premiums at Brighton for two of them, one of which, we understand, he has lately sold for 150 dollars.

If any of your readers have ever known such an instance before, they would much oblige a subscriber if they would mention it in your paper. S.—[Boston Advocate.]

APPLES.—There has not been such a scarcity of apples in this part of the country since the year 1794. The cold weather in May destroyed almost all the fruit on the hills and in the valleys. Some persons have a few apples and will make a small quantity of cider, but the greater part have hardly enough for apple pies, and will be destitute of cider, apple sauce, and winter apples. So far as we have observed, there are more apples on the trees in the meadows and low lands near Connecticut river, than any where else. We have heard old people make the same remark in regard to apples in 1794.—[Hampshire Gaz.]

TAKING UP THE ROOTS OF THE SCARLET RUNNERS IN AUTUMN, AND REPLANTING THEM IN SPRING.—I have practised this mode of culture for some years. When the frost destroys the leaves and shoots, I take up the roots, keep them in sand through the winter, and replant them in May. They grow stronger, and begin to flower much earlier than beans planted in the common way, and never stop bearing till the frost destroys them. I have not set the plants more than one year, but a friend of mine has a plant six or seven years old, which looks as well now as it did the first year; and he has also a row now in pod, which were not either taken up or covered last winter. N. S. N. Nottingham, July 4, 1834.—[Loudon's Gardeners' Magazine.]

PAINTING HOUSES.—A writer for the New-England Farmer, whose communication was published vol. i, page 314, says, "I believe it is a general practice for people to do their painting some time during the three summer months; but repeated experiments have been made within a few years, which prove that a house painted late in autumn, or in the winter, will hold the paint more than twice as long as one painted in warm weather. The reason is obvious—for when the paints are applied in cold weather, the oil with other ingredients form a hard cement on the surface of the clapboards, which cannot easily be erased; whereas a building painted,

(as usual,) in the heat of summer, will soon need a new coat; for the heat causes the oil to penetrate into the wood, and leaves the other component parts dry, which will soon crumble off."

JEWETT'S CHEMICAL WATER-PROOF.—Among the superior articles exhibited at the recent Fair of the American Institute was Col. Jewett's water-proof paste. A boot which had been saturated with it had been standing in water three days without being in the least moist on the inside. A lady's slipper was similarly exposed, with the same results. We have tried it on boots and can speak favorably of it, although, as yet, we have made but a partial trial. The information we have given on this subject in former numbers of the New-York Farmer, together with the following subjoined certificate, cannot fail of recommending it to the notice of our readers. Should it prove a desideratum in protecting the feet from wet, it will be of incalculable benefit to the health of all classes, particularly to farmers, who are constantly exposed, most of the year round, to rain, a damp and wet ground, or to dewy grass.

"Executive Office,

"Columbus, Ohio, June 21, 1834.

"Having worn shoes for the past five months, to which Col. Jewett's Chemical Water Proof had been applied, I can from experience recommend it to the community at large, under the impression that all who use it will find it much to their interest and comfort. I immersed one of those shoes under water, which had been saturated, and found that the leather was made perfectly impervious to water and remained soft and pliable. I believe that leather thus saturated will wear longer than it otherwise would, and conceive the paste to be an article of immense value, and its discovery of great importance to the public.

"ROBERT LUCAS,

"Governor of Ohio."

THE MASHANNOCK POTATO.—We received in a letter from a subscriber in Indiana, last week, a small fine looking potato, in which he gives the following account:

"I send you in this letter the celebrated Mashannock Potato of the west. I call it the Mashannock of the west, as it was produced from a seed of the Mercer potato, by an old Irish woman in Columbiana county, Ohio, about the year 1820. This variety spread over the country in 1824 with such rapidity as to reach almost every farm that year. Since that time it has had no rival among the old varieties. It remains in full perfection to the present day. The Mashannock potato greatly resembles the Mercer of Pennsylvania, but is superior to it in every respect. The Mercer potato is shorter and whiter, and I believe the product not more than one-fourth as much. If your farmers have not this kind of potato already, they will do well to try it.

"The Mashannock has vines of a beautiful light yellow color, medium size, soft and spreading. A common potato is six inches long, as thick as a man can span, and flattened in its form. Overgrown ones are much larger, some seasons weighing from two to three pounds, with lumps on the sides. The vines bear a moderate quantity of small seed-balls, and some seasons when the crop is very good the ground is nearly covered with them. These seed-balls make the greatest variety of potatoes, and the most promising kinds of any I have tried. They sport in endless variety of early and late; large and small, and all colors except red. Of one thousand seedlings raised by myself, in 1832, not one was red, mostly long shaped and excellent.—[Genesee Farmer.]

NEW-YORK AMERICAN.

NOVEMBER 1-7, 1834.

LITERARY NOTICES.

The REVIEW for this week is of necessity postponed. We may comment, however, briefly, on publications lying on our table.

From the *Messrs. Harpers* we have in two very well printed, close and thick volumes, the *Life and Correspondence of HANNAH MOORE*, which, from the orestaste our readers have had of it through these columns, will be eagerly sought after, we do not doubt.

From *John Doyle* we have one of the London annuals—*The Gem*—of which we have only had time to glance at some of the engravings.

Carter, Hendee & Co., of Boston, have sent us the third and fourth book of history, designed as a sequel to the first and second book, by the author of *Peter Parley's* tales. All these we shall have occasion to speak of again.

We conclude with a notice from the *New York Mirror* of a book about to appear, which will claim the admiration and patronage, we are sure, of very numerous readers—*Mr. Dunlap's History of the Fine Arts in the United States.*

[From the *New York Mirror*.]

A HISTORY OF THE RISE AND PROGRESS OF THE ARTS OF DESIGN, IN THE UNITED STATES. BY WILLIAM DUNLAP. IN TWO VOLUMES. VOL.

We have been favoured by the author of this valuable and highly interesting work, with a copy of the first volume, in anticipation, and have been much struck, in the hasty perusal our leisure has enabled us to give it, not only with the quality, but the immense amount and variety of information it contains. Perhaps there is not another man living besides Mr. Dunlap, who could have gathered together such a mass of facts, extending through the whole period of our national existence, and relating to every individual who has wielded a maul-stick, or a chisel, or handled a burin, any where between Canada and the Gulf of Mexico: from John Wat-son, who flourished, after a fashion, in 1715, down to the multitude of clever and rapidly-improving artists of whom Americans, we are proud at the present moment. But it is not only as a copious and faithful record of the rise and progress of the arts among us, that the book deserves and claims the most ample success; it abounds with judicious criticism and most amusing anecdote; and readers of all classes will find in its pages instruction richly mingled with entertainment. To the artist, of course, it will prove invaluable; but a very large proportion of the matter it contains address themselves with equally pleasant and happy effect to the scholar, the man of business in his hours of relaxation, the student of human nature, the literary idler, and even to the belle, when wearied with conquest and admiration—to such as read merely for amusement as well as to the seeker after knowledge. It is an admirable fire-side companion; open it as you will, you will find an abundance of choice morsels; roving with most agreeable variety, "from grave to gay, from lively to severe." You may read it through at once, or keep it on your table or beneath the pillow of your sofa, and take it up whenever you have a spare half hour; and, when you have turned the last leaf of the second volume, you will be strongly tempted to wish you could forget every word, and begin again with all the zest of novelty hanging fresh about its pages. We have already given the readers of the *Mirror* some columns of delightful extracts; but there are plenty more, and we shall, perhaps, draw again upon its stores for the entertainment of our readers, without the slightest fear of wearying them, or producing any desire in their minds except of becoming early purchasers. We have found in it, by the way, a piece of information which is very little known, and which we are glad to see made public, inasmuch as it tends to correct a general, but erroneous impression. Here it is:

"Mr. Leslie returned to London. In the only interview I had with him, which was in my sick chamber a day or two previous to his embarkation on his return, he did not express any feeling of disappointment. With the government of the United States he certainly had no cause of complaint. He was invited to West Point as a teacher of drawing, with

the same emoluments and accommodations which his predecessors had enjoyed. But his friends, anxious that he should be with them, had assured him that the teachership would be made a professorship, with additional advantages corresponding with the other professors, and that a painting-room should be built for him. But in our representative government, this required an act of congress, and the passage of the yearly appropriation bill. This act and appropriation was intended: but Mr. Leslie had taken post at West Point, at the commencement of winter, with his family, never before out of London. The winter is a trying season in a bleak situation on the Hudson—a situation at other times redundant with charms. Mrs. Leslie is a London lady, and her family remained occupants of the house left by the artist; her heart was naturally at home. Leslie, I am told, upon an answer from the secretary-at-war, that he could not order a painting-room built until appropriation was made for it, gladly resigned the situation, and took his family to London again, no doubt happy to escape from the bleak promontory on which they had passed a discontented winter."

We have but one remark to make in addition; we think "the teachership" ought to "be made a professorship" and that a painting room, should be built by the government for the incumbent. The inadequate salary attached to the office makes it indispensable for the artist who fills it to employ his leisure hours to more pecuniary advantage than he derives from his labors in the institution.

FOREIGN INTELLIGENCE.

EIGHTEEN DAYS LATER FROM PORTUGAL.

Death of Don Pedro.—By the ship *Lorena*, Urquhart, from Lisbon direct, the Editors of the *New York Daily Advertiser* have received files of Lisbon papers to the 7th October, from which they learn place on the 11th Sept. and had caused general regret the death of Don Pedro, Duke of Braganza, took throughout the Portuguese nation. The Queen was in exercise of Royal powers, according to the Constitutional charter, and the approval of the Cortes.

The Chamber of Deputies and Peers had sent joint committees to express to her Majesty their sentiments of condolence for the loss the Queen and the whole nation had met with by the death of Don Pedro. The Diplomatic Corps attended.

The inhabitants of Lisbon had, en masse, sympathized with the Queen and august family. The funeral ceremonies had taken place with all possible pomp on 2d Oct.

The Queen had, by a decree, granted several pardons; and at the same time stated that as she was clement towards those who in past times trespassed, she was much more rigorous, and would punish with all possible rigor such persons as should still adhere to rebellion, and to disturb the public peace.

The Chambers continued their legislation for the perfect organization and well being of the nation.

The latest news from Spain was calculated to bring dismay to the Carlist party, which were destitute of every thing, and pursued by the Spanish army.

News had been received of fresh disturbances in Rome, in consequence of which the papal funds have lowered one franc.

LATER FROM FRANCE.—By the *Francis Depau*, from Havre, we have Paris papers of the 5th ult., which furnish London dates of the 3d.

The intelligence of Don Pedro's, death at Lisbon, reached Paris on the 5th.

Mr. ARMAND CARREL surrendered himself on the 5th to the Police, and was sent to St. Pelagie to undergo his term of imprisonment.

The affairs of Spain are yet undecided, though the accounts represent the affairs of Don Carlos as in a poor way. The cholera is destroying a great many lives in various parts in Europe. Commercial affairs appear to be in a prosperous condition.

Mr. William Blackwood, the proprietor and publisher of the celebrated *Magazine* which goes by that name, died at Edinburgh a few weeks ago. He had been in a very delicate state of health for some time past. He was considerably advanced in life.—It is not generally known that he was editor as well as proprietor of *Blackwood's Magazine*. He was greatly assisted by Professor Wilson. Not only were all that distinguished writer's contributions inserted, but his recommendation or otherwise of the

articles of others went a great way in influencing the decision of Mr. Blackwood. Mr. B. corresponded himself with all the contributors to his *Magazine*, and by this means increased their attachment both to it and himself. He was extremely liberal in the remuneration he gave for contributions.—Other publishers regulate the price they give for articles by the length to which they extend; but Mr. Blackwood, when he met with an article that particularly pleased him, would often give four times the price for it which it would have brought if paid by the sheet—adding, when authors would have expressed their surprise at their liberality, that he never paid for literature by the yard, as if paying for a piece of cloth; but he wished to measure the quality rather than the quantity. This *Magazine* is a most valuable property. Perhaps it is the most profitable of the kind in the world. It has a circulation of nearly 9,000 copies monthly.

See page 702.

SUMMARY.

Mr. Webster, Mr. Ewing, Mr. Grundy and Mr. Southard, all of the United States Senate, are here in order to examine, as it is understood, a portion of them into the affairs of the United States Bank and the deposit banks; and another portion into the affairs of the Post-office. Their stay will, it is probable, be prolonged several days.

[From the *Frederick (Md.) Herald*.]

Judge Duvall of the Supreme Court.—In our last we copied an article from the *New York Commercial*, which stated that it was the intention of Judge Duvall to resign his seat upon the bench of the supreme court of the United States. This report is confirmed by a gentleman who has recently conversed with the judge upon the subject. The reasons assigned for this act are his advanced age and the infirmities consequent thereon,—particularly a partial deafness, which much impairs his usefulness, and, in some measure, disqualifies him for a proper discharge of his judicial functions.

By the *Wm. Gibbons* from Charleston, (S. C.) we have accounts to last Saturday Evening.

NEW ORLEANS, Oct. 20.—The brig *Ariel*, arrived this morning from Norfolk, brings about 209 negroes, probably for the purpose of increasing the number of vagabonds and thieves with which our city is already amply provided.

The schooner *Philadelphia*, which sailed from Aransas, Texas, on the 6th instant, arrived here this morning. She has on board about forty emigrant passengers from Power's colony on the Mission river, Texas. We learn from a passenger on board that they are completely disgusted with the country,—that nearly all the colony, principally composed of Irish, had been sick with the fever, and that a number of deaths had taken place among them—it is further stated that it is the intention of all the colonists to leave the country as soon as possible. Those who came passengers in the *Philadelphia* were more or less afflicted with fever and ague when they left, but were rapidly recovering.

We hope that some steps will be taken by our liberal-minded citizens to mitigate the distresses of these unfortunate emigrants.—[*Courier*.]

NEW ORLEANS, Oct. 22.—A very sudden and sensible change has taken place in the state of the weather. Winter has come upon us unawares. The rain of Saturday evening was succeeded by a chilling and cold day. On Monday morning, we noticed many a half naked and shivering slave in the market places on whom this stolen march of bleak winter seemed to operate with impunity, while the better prepared for the visit, were wrapped in furs and covered with over cloaks.

NATCHEZ, Oct. 17.—Two Steamboats Sunk.—On the 4th instant, fifteen miles above Helena, the *Tom Jefferson* struck a snag, became unmanageable, floated down, and sunk in about six feet water on a sand bar. Her cargo consisted of merchandize for the upper country. Report said it was not insured. The boat is broken in two.

The Return on the 5th instant, on her way down, run upon a sand bar near Princeton, Mi. and in getting off, struck a snag and sunk in five feet water. She was loaded principally with Bagging and Rope. A merchant in Grand Gulf, had goods to the amount of fourteen thousand dollars on board, not insured.—[*Gazette*.]

The Cooper Fund.—The sum of five hundred dollars was cleared at the benefit in Cincinnati in behalf of the Cooper Fund. The amount was immediately

remitted to the treasurer of the fund, W. T. McClure, Esq. of New York.

MR. MILLS' ASCENSION FROM LANCASTER.
To the Editor of the United States Gazette:
PHILADELPHIA, SUNDAY AFTERNOON.

SIR:—In conformity with the desire of some friends in Lancaster, I made, on Saturday, the 1st of November, an ascension from that place.

Half an hour before the specified time, I had my balloon completely inflated; and as the spectators were already on the ground, I set off six minutes before three, P. M. although I had announced my intention of going at three.

At that time, the thermometer indicated a temperature of 54 deg. and the barometer stood at 29 deg. 8". The wind nearly due east, was light and irregular. My course was at first westward, so that I passed immediately over Lancaster, when a change of current took me several miles in a northward direction. As I did not rise high, I could distinctly hear the sound of the horses' hoofs, as their riders pursued me. My elevation at that time, was 27 deg. 5' and the temperature 44 deg.

A new and higher current of air from the north and west, soon drove me back towards Lancaster; which, as I passed it, appeared to be half a mile or less to the westward of my course. I could see the assemblage in the inclosure in which I had left them, but I was out of hearing of their salutations. My elevation at this time, was about 24 deg. 5' or, very nearly a mile above the earth.—At this time, I could see a vast expanse of beautiful country, and among other objects, recognised the Susquehanna, and its bridge, at Columbia.

Soon after leaving Lancaster for the second time, I entered and passed through the clouds, which though thick enough to conceal the earth from view, did not seem to be more than 20 or 30 yards in thickness. Emerging from this stratum, I suddenly found myself in a bright sunshine, with a vast field of white opake vapours below me, convoluted into singular forms, and presenting a variety of elevations and cavernous depressions.

I continued above the clouds for nearly an hour, and during that time saw the earth only three times and then but for a moment, as the rolling clouds beneath happened to break their well preserved continuity.

As I fell below the clouds, I was surprised to see a beautiful river, full of boats and vessels, and to find myself almost immediately over a small town, on its margin, while I saw another of greater size at a little distance inland. After some reflection, I felt sure that it was not either the Susquehanna or the Chesapeake, but it never entered my head to suppose that I could have travelled so far as to have reached the banks of the Delaware, at New Castle, and that the beautiful city of Wilmington lay in sight, to the north of my position.

Attempting to descend here, to avoid crossing the river, I encountered the eastern current, with which I had started at Lancaster, and was carried by it across the State of Delaware. I, at 5 P. M. precisely, touched the earth, near Cooch's Mills, 3 miles from Elkton.

As I passed over a house near this place, some white people hailed me, "who are you?" I replied by asking "where am I?" to which they answered, "go back where you came from." I soon after let go my anchor near to the turnpike, and fortunately it laid hold of a fence, when I called to two black men to come to my assistance, which at first they declined, without giving me any answer in words. After repeated solicitations, they were induced to approach, and drawing down the balloon, brought me to the ground.

Soon afterwards, I was joined by a party on horseback, from Elkton, who taking hold of the anchor rope, as I sat in the car, carried me, sailing through the air, along the turnpike, to Elkton, a distance of 3 miles, where at half past 6, I arrived in safety, discharged the gas, folded the balloon, and at 7, had finished the folding and securing the balloon, car, &c.

As we passed along the turnpike, the intervention of trees sometimes made the road too narrow for the passage of the balloon, which was then, by lengthening the cable, elevated above them, and brought over their tops.

This morning I went to Frenchtown, and by rail road and steamboat reached Philadelphia at 5 P. M. It is not easy to tell the exact distance traversed during the two hours and six minutes passed in the air, but it was probable, that it was not less than one hundred miles.

In descending, I adopted a simple plan of estimating

the force and direction of the current beneath me. A feather of sufficient size to be visible at a distance, loaded in such a manner as to fall slowly, floats along with the balloon and its current, until it enters another atmospheric movement, when it is seen to take the new direction. The aeronaut may thus be guided to a choice of current before he enters it. In ascending, the same kind of knowledge may be had by letting off very small balloons prepared for the purpose, and carried up in the car.

I cannot conclude, without expressing my thanks to the friends at Lancaster, who gave me countenance and assistance, and to the good people of Elkton who did every thing in their power to promote my comfort and convenience.

The annexed Table, will show the various altitudes, and their corresponding temperatures. I should have noted the time of entering the clouds, and their exact elevation, but I was so completely absorbed by the beauty and variety of the phenomena, that I entirely forgot to make at that time, the necessary observations. I am, very respectfully, yours, &c.

Time.	Barometer.	Thermometer.	
2 54	21 8	59	W.
3 5	27 5	44	N.W.
3 15	25 0	46	N.
3 20	22 2	34	E.N.E.
3 30	20 4	32	S.E. by S.
4 0	19 9	34 30	

[From the Boston Daily Advertiser.]

THE UNITED STATES AND BRAZIL.—The Aurora Illuminense of Rio Janeiro, of Aug. 22, publishes under the Rio Janeiro head, the following article, from which it would appear that a project is entertained in that quarter, at least by some individuals, of political union between this country and the Empire of Brazil. A formal exposition of a similar kind was made some years ago, as our readers will recollect, by the Republic of Central America, and rejected. The same result would probably occur in the present instance, if the offer should really take place, which, however, we do not consider probable. We have seen no intimation of any such intention other than that conveyed by the motion of the Messrs. Franca, which does not seem to have been sustained, and was apparently the act of a few individuals.

Rio Janeiro.—In the House of Deputies the following bill was offered, and a motion was made to proceed to the consideration of it immediately, which was rejected. We deem it unnecessary to add any commentary, remarking that we publish the bill in the exact form in which it was presented by the Deputies Franca.

Decree of the Legislative General Assembly.

Article 1.—The Empire of Brazil and the United States of America shall form a union for their mutual defence against foreign aggression, and for their common advantage in matters of domestic interest.

Article 2.—The two nations shall assist each other with all their forces against any hostile attack, and shall contribute annually for this purpose such sums as may be agreed upon.

Article 3.—Each of the two nations shall have Representatives in the National Assembly of the other.

Article 4.—The products of each nation shall be received in the ports of the other on the same footing with its own, and held exempt from any foreign duty.

Article 5.—The two nations shall aid each other in effecting a communication from one to the other of the useful institutions, arts and products that may now belong respectively to each.

Article 6.—The citizens of each of the two nations shall enjoy in the territory of the other all the privileges of natives.

Art. 7.—Questions of right occurring between citizens of the two nations, shall be decided either by mutual consent, by arbitration, or by a jury composed of equal numbers of both.

Art. 8.—The nations bind themselves to aid each other in the preservation of a national form of government, and against any dangers that may threaten their moral or physical improvement.

Art. 9.—The Government of Brazil will endeavor to negotiate a treaty of alliance to this effect which shall be permanent.

Art. 10.—This treaty when concluded shall be laid before the General Assembly, for its consideration and approval.

Art. 11.—All preceding laws in contravention of this are revoked.

House of Deputies, Aug. 18, 1834.

[Signed,]

C. J. FRANCA.
A. J. FRANCA.
E. J. FRANCA.

OFFICIAL.—NAVY REGISTER.

Changes, Notices, &c. for the month of October, 1834.

VESSELS OF THE DIFFERENT SQUADRONS.

Mediterranean.—Ship of the Line—Delaware.—Frigates—United States, Constellation, and Potomac. Sloop—John Adams. Schooner—Shark. West Indies.—Sloops—Vandalia, St. Louis, and Falmouth. Schooners—Experiment and Grampus. Coast of Brazil.—Sloops—Natchez, Ontario, and Erie. Schooner—Enterprise.

Pacific.—Frigate—Brandywine. Sloops—Fairfield and Vincennes. Schooners—Dolphin and Boxer.

NOTICES.

Delaware 74, Captain Nicholson, Com. Patterson on board, was in the Levant the last advices, (29th August,) having visited Egypt and Syria, and was expected at Malta about the middle of September, on his way down.

Frigate United States, Captain Ballard, returned to Vourla Bay about the 5th August, from a cruise in the Gulf of Salonica and its neighborhood, all well, and was near Smyrna the 29th August.

Frigate Constellation, Captain Read, arrived at Malta 17th July from Naples, and sailed again the 21st for Tripoli and Tunis, on the way to Mahon.

Schooner Shark, Lieut. Comd'g Paulding, was in company with the Delaware, above noticed.

Sloop Vandalia, Captain Webb, still at Norfolk, under repairs.

Sloop St. Louis, Captain McCauley, still at Norfolk, but on the eve of sailing for her station in the West Indies.

Sloop Falmouth, Captain Rousseau, sailed from Pensacola 9th October, on a cruise, to return about the 10th of January.

Schooner Experiment, Lieut. Commanding Paine, and schr. Grampus, Lieut. Comd'g White, were still at Pensacola the 12th Oct.

Sloop Natchez, Capt. Zintzinger, bearing the broad pendant of Com. Renshaw, left Rio the 14th August, and arrived at Bahia the 21st; still there 3d September, and to sail for Rio that evening or the next morning.

Sloop Ontario, Capt. Salter, left Rio the 14th Aug; arrived at Bahia the 31st from Pernambuco; was there 3d Sept.

Frigate Brandywine, Capt. Deacon, sailed from Rio for the Pacific station 14th August.

Sloop Fairfield, Capt. Vallette, was at anchor off the Island of Puna, in the Guayaquil river 25th August—all well.

Sloop Vincennes, Com. Wadsworth, sailed from Payta 12th August for Callao.

Schooner Dolphin, Lieut. Commanding Voorhees, was at Callao the last advices (25th August.)

Schooner Boxer, Lieut. Comd'g Page, has probably left Norfolk before this for her destination in the Pacific.

Frigate Potomac, Captain Nicholson, sailed from Boston 20th October for the Mediterranean station.

THE MAILS.

For the Mediterranean, can be sent by the ship Herald, to sail from New York 12th instant; and by two shore ships, to sail from Norfolk from the 10th to the 16th instant.

For the Coast of Brazil, by the brig Paulina, to sail from New York for Rio 14th instant; and by a store-ship, to sail from Washington about 15th instant.

For the Pacific, by the ship Leonidas, to sail from New York 15th instant; and by store-ship, to sail about the same time from Washington.

NAVY DEPARTMENT,
November, 1st, 1834.

NAVY DEPARTMENT.

Extract of a letter addressed to the Secretary of the Navy, by Capt. HENRY E. BALLARD, dated U. S. frigate United States, Nauplia de Romania, August 23d, 1834.

"I do myself the honor to inform you, that in obedience to my instructions, I reached this anchorage three days ago from a cruise amongst the islands—all well—and that I shall sail for Athens and Smyrna, as soon as the land breeze comes to us to-night.

"We had the pleasure to learn, a day or two previous to our leaving Vourla, (about the 11th inst.) that the Commander in Chief was at Alexandria, in the Delaware, all well.

"The young King of Greece did me the honor to visit my ship yesterday, for two hours, and, together with his Ministry, expressed themselves highly delighted with the order and condition she is in, as well as with the kind reception given them."

PROCLAMATION.
By William L. Marcy, Governor of the State of New York.

For the purpose of rendering devout acknowledgments unto the RULER of NATIONS, for the dispensation of His numerous favors vouchsafed to the people of this State, during the past season, I do hereby, in compliance with established usage, recommend THURSDAY, THE ELEVENTH DAY OF DECEMBER NEXT, to be observed by them as a day of Public Thanksgiving.

In witness whereof, I have subscribed my name, and affixed the privy seal of the State, this 27th day of October, 1834.

W. L. MARCY.

MASSACHUSETTS.—A letter from Batavia (East Indies) dated April 23d, announces the death of Captain Philip F. Livingston, formerly an officer of the U. S. Navy, by the hand of violence, together with six other persons on board his Ship, the Matilda of Batavia, bound from that port to some other place in the East, with a cargo of salt, and \$250,000 in specie belong to the Dutch government. The murderers succeeded in their object, which was to get possession of the money, and having scuttled the vessel, which soon after sunk, they landed on a neighboring shore. Captain Livingston was a son of Judge William Livingston, of Kings county,—was born at Flatbush, L. I., and was about 48 years of age. The Matilda was owned by Messrs. Payne, Sticker & Co., of Batavia.

A black frost with ice, occurred at Charleston, on the 21st instant, thus putting an end to the reign of Yellow Fever, or, as it is called there, the Stranger's Fever.

CHARLESTON, OCT. 25.—The funeral of Captain Griswold, Commandant of Castle Pinckney, on this station, took place yesterday morning, in this city, with military honors, and all the usual demonstrations of respect.

SAYANNAH, OCT. 22.—The Weather and the Health of the City.—Night before last, the first frost of the season occurred. For two days past, the weather has been delightful—the atmosphere clear, dry, and bracing. The Cholera which has been desolating the River Plantations has been subsided so long a time that all fears of its re-appearance are passing away. The health of our city may challenge comparison with that of any other in the Union. Indeed there has been peculiar cause for thankfulness on the part of our citizens, that although Cholera has existed in the limits of the city, the victims have been few and isolated.

[From the Albany Evening Journal of Friday.]

The following gentlemen were this day admitted by the Supreme Court as Counsellors and Attorneys:

Attorneys.—John G. Atterbury, Daniel Baldwin, Cornelius H. Bryson, Walter Clark, William Cochran, Morris M. Davidson, Louis De Witt, Eliaha Foot, Jr., James M. French, William L. Greenly, Martin Grover, Thomas M. Howell, David L. Johns, Walter B. Kellogg, Erasmus H. Marshall, Mortimer Porter, Pierpont Potter, John B. Purroy, Lyman Sanford, Wm. C. Schuyler, George G. Scott, Henry Sherman, James M. Smith, William Stuart, Robert C. Van Rensselaer, Henry D. Varrick, Horace B. Webster, Augustus Wynkoop, Jr., James J. Wynkoop, Harvey P. Yale, Halsey R. Wing, Alfred H. Corning, Edward Clark, Albert Van Holler Powell, Frederick W. Baker, J. M. Casey.

Counsellors.—Benedict Bagley, N. Dane Ellingwood, Josiah W. Fairfield, Alonzo Green, Joseph C. Hart, James McCall, P. E. Pitcher, Horatio G. Prall, Lucius Robinson, Win. Soul, John Van Buren, Edgar S. Van Winkle, Wm. Walton, John Davis, Wm. H. Fondes.

A Tall Visitor.—We were visited yesterday, by a gentleman from North Carolina, who measures in height no less than six feet eight inches. He naturally excited some astonishment among our clerks, one of whom stands rather above six feet; but who, along side of the stranger, seems but a half grown boy. Our visitor stated that he has four brothers, whose aggregate height is 26 feet 3 inches.—His father measures six feet one inch. North Carolina may well boast of the tallness of her sons, especially as this specimen of growth is not the highest that may be produced, our friends having assured us that one of his neighbors measures seven feet. Truly, he must belong to a race of giants.—[Phil. Gazette.]

Melancholy Casualty.—Amos Richardson, Esq., a Member elect of the approaching Legislature from Bladen county, was unfortunately killed a few days since by the bursting of his gun, while in the pursuits of the chase.

[From Neilson's Gazette of Oct. 23.]

A fire, with a melancholy loss of life, occurred yesterday in the parish of St. Vallier, about twenty miles below Quebec. Michel Letellier, Esq., aged 87, formerly one of the members of the Assembly, was burned to death, in the house of his son, Eustache Letellier. He was in a room where a stove was lit to dry lint, and it got lit on fire by being too near the stove. In his anxiety to suppress the flames, Mr. Letellier's efforts, from his great age, were attended with the loss of his own life, having been wholly enveloped in the very combustible material. The house and most of the property was also consumed.

Emigrants to Africa.—The ship Ninus, Captain H. Parsons, sailed from Norfolk, on Sunday last, for Liberia, in Africa. She had on board 128 emigrants, 110 of whom were liberated by the late Dr. Hawes, of Rappahannock, Va. who also appropriated funds for their transportation.

With the approbation of the Parent Colonization Society, these go to found a new colony at Bassa Cove, about eighty miles distant from Monrovia, on the coast of that continent, whose nations are sitting in darkness, and in the region of the shadow of death. They are sent to give them the light of Christian example, and to introduce among them the arts of civilized life. This colony is to be established on strictly Christian and temperance principles.—These first emigrants to this new colony are nearly all members of the Baptist Church, and have in their number three preachers of their own colony. Twenty of them can read and write; and a goodly portion of them have valuable trades, and not one of them is superannuated. All of them seem to be above the ordinary class for vigor and intelligence.

There are also on board the ship Ninus fourteen very valuable slaves, liberated by the truly benevolent Mrs. Ann R. Page, of Frederick county, Virginia, sister of Bishop Meade. They are sent to the old colony, in order to join a number who are settled there, and who had been previously liberated and sent out by the Meade family. These are all amply provided for, having large stores of clothing, provisions and tools, and every thing necessary to render them comfortable.

There is also on board of the same ship two white gentlemen and one lady, who go out as instructors. Upon the whole, there has no expedition gone to that country better equipped, and which has fairer prospects of success than the present.

[From the Boston Atlas.]

FROM LISBON.—Captain Manson, of the Barque Leonidas, from Lisbon, states that every thing was quiet on the 19th September. Don Pedro's affairs in this world were nearly wound up. He was in the last stage of dropsy, and his death is daily expected.

LATER FROM EUROPE.—By the France from Havre, and Henry from London, Paris dates of 24th and London of 25th, are received.

Nothing of interest is quoted either as to French or English affairs. Spanish remain as they were; and Portuguese declining somewhat. We have no time today for long extracts.

ENGLAND.

PARLIAMENT, Sept. 25th.—In a few minutes Mr. Lee, one of the Clerks of the House of Commons, attended by about twenty gentlemen, entered the House.

The Lord Chancellor then read the Commission, issued under the Great Seal, authorizing the Commissioners to prorogue Parliament until Thursday, Oct. 23d.

The Commons then withdrew.

PORTUGAL.

[From the Morning Post.]

Our Lisbon letter of the 13th, comprises the occurrences deserving of notice from the 8th, the date of our last advices. Don Pedro was still alive, but pronounced beyond the possibility of recovery. He has at length been made sensible that his dissolution is at hand, and accordingly had given orders to be conveyed from the Ajuda to the Queluz Palace, the place of his birth, and when our letter was closed, was left lying in the very room in which he was born.

He had expressed a wish to perform some action

which should show hereafter, that he did not depart this life at variance with his brother Don Miguel, which, it is added, his Ministers took care to prevent. The intrigues respecting the Regency were going on, the present Ministers imagining that their existence in office depends upon the Duchess de Breganza's holding the supreme power, in opposition to the Charter, which would place the Regency in the hands of the Princess Isabel Maria, who held it when Don Pedro's new Constitution was put in force.

The insurrection in the interior provinces evidently increases. The guerrilla parties are strong and formidable, at the same time that the desertions and emigrations to Spain continue. The French battalion, which had revolted and fortified the barracks of Val de Perriers, has been disarmed and embarked in a Swedish ship. As we anticipated, the idea of marching an army into Spain, in aid of Queen Christina, is abandoned. Don Pedro cannot even put down the guerrillas within the Portuguese territory.

Judging from the state of the public mind in Portugal, (and the same may be said of Spain) we deem it impossible for the Lisbon Cortes to legislate much longer. The members are insulted on leaving the House, and only the other day the Baron Renduff (a noted character it must be confessed) was hooted through the streets, and followed with the cry of "Thief!" The people cannot respect Don Pedro's legislators, and much less obey their mandates.

FRANCE.

PARIS, SEPTEMBER 24.—Stock Exchange Sept. 23, half past 4 o'clock.—The business transacted has been upon a very limited scale, in consequence of the uncertainty as to what the decision of the Procuradores will be with respect to the Spanish Loans. For cash the Funds have fallen, and for the accounts the Threes closed on Saturday, while the Fives have given way. Spanish have all declined, but the Rentes Perpetuelles only in a trifling degree. For cash the Fives have fallen 25c.; the Threes 26c.; Cortes 1 1-8, Spanish Threes and Don Pedro's Loan 1-2; Haytian 2 fr. 50c. t. Belgian have risen 1-2. For the account the Fives have declined 15c.; Rentes Perpetuelles 1-4; Spanish Threes 1 3-8; Neapolitan have improved 10c.

SPAIN.

The Courier Francais, affirms that Don Carlos is in a state of ill health and disagreement, arising out of fatigue, privation and disappointment, at his cause making no progress, and that his partisans are thinking of calling to Spain his eldest son, who is about seventeen years of age. Unless the insurgents can make themselves masters of some sea-port, to introduce supplies sent by their friends, or can capture the magazines or disarm the numerous corps of their adversaries, it is impossible for them to possess arms and ammunition. A serious embarrassment for the Carlists is the obstinacy of the towns in not embracing the cause of the Pretender.

GENIUS AND METHOD.

[From a Letter of Dideroit to Mlle. De Voland, published in his Memoirs.]

At seven o'clock the company sat down to cards, and Messrs. Le Roy, Grimm, the Abbe Galiani, and I, began to converse. I must teach you to know the Abbe, whom perhaps you have looked upon merely as an agreeable man. He is something better.

A dispute arose between Grimm and Le Roy about Genius and Method. Grimm detests method: it is, according to him, the pedantry of literature. Those that can do nothing, he maintained, but arrange, had better not give themselves the trouble; those who can learn nothing but by means of arrangements had as well remain ignorant. "But," said Le Roy, "it is method which makes genius available." "And which spoils it." They said a great many things which it is not worth while mentioning to you, and they would have said a great many more had not Galiani interrupted them.

"I remember a fable, my friends, which I must tell you. It is rather long, perhaps, but it won't tire you.

"One day in the middle of a wood, there arose a dispute about singing between the nightingale and the cuckoo. Each gave the preference to his own talent. 'What bird,' said the cuckoo, 'has so simple, natural, and measured a song as I?'—'What bird,' said the nightingale, 'has a song so sweet, varied, light and brilliant as mine?' 'I say few things, said the cuckoo, 'but they have weight and order, and one remembers them.' 'I am fond of talking,' said the nightingale, 'but what I say is always new, and never wears. I enchant the woods, the cuckoo saddens them. He is so attached to his mother's lesson, that he never hazards a note he has not learned from her. I acknowledge no teacher; I laugh at

Few more rare and delicate gems have come from the East than the following, which we find set in the *Bengal Annual*.

"Nay, jest not! woman loves not twice;
Her scenes of infancy are nought
When, yet unthrown—her fate's bright dice
Are trembling;—and her heart untaught
With waywardness and change is fraught.
Believe me, woman while a child
Thinks but of love as something new—
A fleeting rainbow on the wild!
The bud she is, that held no dew
Until a blossom cup it grew.
In girlhood days she loves all things
That live or bloom on heath or sward:
In womanhood, her being clings
To only one, with rapt regard,
Her light of life and great reward?
Oh! Woman's love, when woman grown,
Is fix'd as in the polar star;
And (childish fancies ever flown)
A crystal well, in cave of spar,
Her feelings pure and moveless are."

(FROM THE GLOBE.)

By the President of the United States of America.
Proclamation.

Whereas, a Convention between the Government of the United States of America, and her Majesty the Queen Regent, in the name and behalf of her Catholic Majesty, Donna Isabel the Second, was concluded and signed by their respective Plenipotentiaries, at Madrid, on the seventeenth day of February, in the year of our Lord, one thousand eight hundred and thirty-four; which Convention is word for word as follows:

Convention for the settlement of Claims between the United States of America and her Catholic Majesty.

The Government of the United States of America, and her Majesty the Queen Regent, Governess of Spain during the minority of her august daughter, her Catholic Majesty Donna Isabel II, from a desire of adjusting by a definitive arrangement the claims preferred by each party against the other, and thus removing all grounds of disagreement, as also of strengthening the ties of friendship and good understanding which happily subsist between the two nations, have appointed for this purpose, as their respective plenipotentiaries, namely: the President of the United States, Cornelius P. Van Ness, a citizen of the said United States, and their Envoy Extraordinary and Minister Plenipotentiary near her Catholic Majesty Donna Isabel II, and her Majesty the Queen Regent, in the name and behalf of her Catholic Majesty Majesty Donna Isabel II, his Excellency Don Jose de Heredia, Knight Grand Cross of the Royal American Order of Isabel the Catholic, one of her Majesty's Supreme Council of Finance, ex-Envoy Extraordinary and Minister Plenipotentiary, and President of the Royal Junta of Appeals of Credits against France; who, after having exchanged their respective full powers, have agreed upon the following articles:

ARTICLE I.

Her Majesty the Queen Regent and Governess, in the name and in behalf of her Catholic Majesty, Donna Isabel II. engages to pay to the United States, as the balance on account of the claims aforesaid, the sum of twelve millions *vellon* in one or several inscriptions, as preferred by the Government of the United States, of perpetual rents, on the great book of the consolidated debt of Spain, bearing an interest of five per cent. per annum. Said inscription or inscriptions shall be issued in conformity with the model or form annexed to this Convention, and shall be delivered in Madrid to such person or persons as may be authorized by the Government of the United States to receive them, within four months after the exchange of the ratifications. And said inscriptions, or the proceeds thereof, shall be distributed by the Government of the United States among the claimants entitled thereto, in such manner as it may deem just and equitable.

ARTICLE II.

The interest of the aforesaid inscription or inscriptions shall be paid in Paris every six months, and the first half yearly payment is to be made six months after the exchange of the ratifications of this Convention.

ARTICLE III.

The high contracting parties, in virtue of the stipulation contained in article first, renounce, release, and cancel all claims which either may have upon the other, of whatever class, denomination, or origin they may be, from the 22d of February, one thousand eight hundred and nineteen, until the time of signing this Convention.

ARTICLE IV.

On the request of the Minister Plenipotentiary of Her Catholic Majesty at Washington, the Government of the United States will deliver to him, in six

months after the exchange of the ratifications of this convention, a note or list of the claims of American citizens against the Government of Spain, specifying their amounts respectively, and three years afterwards, or sooner if possible, authentic copies of all the documents upon which they may have been founded.

ARTICLE V.

This convention shall be ratified, and the ratifications shall be exchanged, in Madrid, in six months from this time, or sooner if possible.

In witness whereof, the respective Plenipotentiaries have signed these articles, and affixed thereto their seals.

Done in Triplicate at Madrid, this seventeenth day of February, one thousand eight hundred and thirty-four. [Seal.] C. P. VAN NESS, [Seal.] JOSE DE HEREDIA.

And Whereas the said Convention has been duly ratified on both parts, and the respective ratifications of the same were exchanged at Madrid, on the fourteenth day of August, one thousand eight hundred and thirty-four, by Cornelius P. Van Ness on the part of the United States, and His Excellency Don Francisco Martinez de la Rosa, on the part of Her Catholic Majesty—Now therefore be it known, that I, ANDREW JACKSON, President of the United States, have caused the said Convention to be made public, to the end that the same and every clause and article thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington, this first day of November, in the year of our Lord one [L. s.] thousand eight hundred and thirty-four, and of the Independence of the United States the fifty-ninth. ANDREW JACKSON.

By the President: JOHN FORSYTH, Secretary of State.

The following is a translation of the form, or model, of the inscription:

No. —	Perpetual rent of Spain.
Cupon of —	Payable in Paris at the
dolls. —	rate of 5 per cent. per an-
of rent payable in —	num.
Paris on the — day	Inscribed in the great book
of — 183— Cu-	of the the consolidated debt.
pon No. 1.	

This inscription is issued in pursuance of a convention concluded at Madrid on the — day of — 183— between her Catholic Majesty the Queen of Spain, and the United States of America, for the payment of the claims of the citizens of said States.

INSCRIPTION No. —

Capital.	Rent
Dollars or Francs.	Dollars or Francs.

The bearer of this is entitled to an annual rent of — dollars or francs, payable at Paris every six months, on the — and — of — by the bankers of Spain in that city, rating each doll at 5 francs 40 centimes, in conformity with the royal decree of December 15th 1825.

Agreeably to said royal decree an appropriation of one per cent. on the nominal value of this rent is made annually at compound interest for the extinction of the same, which amount shall be employed by the above mentioned bankers in such extinction periodically at the current rate.

Madrid of 183
The Secretary of State and of the
department of Finance.
The Directors of the Royal Caisse
& Amortisation.

In witness whereof we the undersigned Plenipotentiaries of Her Catholic Majesty the Queen of Spain and of the United States of America, have signed this model and have affixed thereunto our seals.

Done at Madrid this — day of
[Seal.] JOSE DE HEREDIA.
[Seal.] C. P. VAN NESS.

OFFICIAL.

Department of State, Nov. 3d. 1834.

By the 4th article of the Convention concluded with Spain on the 17th of February last, a copy of which is published with the President's Proclamation of the 1st instant, it is stipulated that the Government of the United States will deliver to the Spanish Minister at Washington, in six months after the exchange of the ratifications, a note or list of the claims of American citizens against the Government of Spain, specifying their amounts respectively. The ratifications having been exchanged at Madrid on

the 14th of August last, the term within which this list is to be furnished to the Minister will expire on the 14th day of February next. It is therefore requested that all persons having claims against the Spanish Government, which have originated since the 22d of February 1819, and before the time of signing the Convention, and which are supposed to be included in the terms of the said treaty, will send to this Department without delay, a note thereof, specifying the nature and amount of each claim, and the name of the claimant.

JOHN FORSYTH, Sec'y of State.

AGENTS FOR NEW PUBLICATIONS.

HENRY G. WOODHULL, of Wheatland, Monroe county, New York, is agent for the following Publications:
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The Mechanics' Magazine, two volumes a year, at \$3.00 per annum.
The Quarterly Journal of Agriculture and Mechanics, at \$5.00 per annum, or \$1.25 per number.
The Family Magazine, 416 pages a year, at \$1.50 in advance.
The Monthly Repository and Library of Entertaining Knowledge, of 36 pages a month, at \$1.00 in advance, now in the 5th volume, bound volumes \$1.25.
The Ladies' Companion, of 54 pages a month, at \$3.00 per annum, in advance.
The Rochester Gem, at \$1.50 in advance.
All communications addressed to me, at Wheatland, Monroe county, will be promptly attended to. September 19, 1834.
nov6 Cif.

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The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, warranted of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

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* Mr. Thorburn is also Agent for the following publications to wit:—New York Farmer and American Gardener's Magazine; MECHANICS' MAGAZINE and Register of Inventions and Improvements; AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the New-York AMERICAN, Daily, Tri-Weekly, and Semi-Weekly: either or all of which may be seen and obtained by those who wish them, by calling at 347 North Market street, Albany.

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Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13-ly

NOTICE TO MANUFACTURERS.

SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29tf RM&F

TOWNSEND & DUFEE, of Palmyra, Manufacturers of Railroad Rope, having removed their establishment to Hudson, under the name of Dufree, May & Co. offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.
Hudson, Columbia county, New-York, January 29, 1833.